

Fr m:

Rao, Manjunath N.

Sent:

Thursday, September 26, 2002 11:05 AM STIC-Biotech/ChemLib

To: Subject:

Sequence search request for 09/870,113

From: Manjunath N. Rao

Art Unit 1652, Room 10A11 Mail Box in Room 10C 01

Phone: 306-5681

Date: 9-20-02

Please search the following as soon as possible for application with serial number 09/870,113

SEQ ID NO:3, 5,7,9,11, against all commercial nucleic acid databases including issued patents database and pending application database and provide a print of all results.

If y u have any questions please call me at the above phone number.

**Thanks** 

**Edward Hart** Technicai Info. Specialist STIC/Biotech CMI 6B02 Tel: 305-9203

Manjunath N. Rao, Ph.D. Biotechnology Patent Examiner Art Unit 1652, Room 10A11 Crystal Mall 1, USPTO.

Searcher:
Phone:
Location:
Date Picked Up: (7) 10/00
Date Picked Up: 0/26/78  Date Completed: 0/26/76
Searcher Prep/Review:
Clerical:
Online time:

TYPE OF SEARCH:
NA Sequences:5
AA Sequences:
Structures:
Bibliographic:
Litigation:
Full text:
Patent Family:
Other:

VENDOR/COST (where applic.) STN:
DIALOG:
Questel/Orbit:
DRLink:
Lexis/Nexis:
Sequence Sys.:
WWW/Internet:
Other (specify):

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Homo sapi

Perfect score:

Sequence:

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on:

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Scoring table:

Searched:

Minimum DB : Maximum DB :

Database

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AF32/402 1448 bp mRNA linear PRI 02-MAY-2001 mRNA, complete cds, alternatively spliced, nuclear gene for mitochondrial product.
                                                                                        AF288621 Mus muscu
AF23466 Homo sapi
AF361699 Mus muscu
AF361699 Homo sapi
AC015013 Homo sapi
AC015013 Homo sapi
AC01642 Homo sapi
AC01642 Homo sapi
AC02557 Homo sapi
AC02551 Caenorrhabdi
AY060268 Drosophil
AY060268 Drosophil
AY060268 Orosophil
AY0603518 Oryza sat
AF217402 Drosophil
AC012317 Mus muscu
AC02331 Homo sapi
AC012317 Mus muscu
AC012318 Homo sapi
AC01213 Mus muscu
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AC0121570 Homo sapi
AC01250 Homo sapi
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AC07884 Mus muscu
AC10858 Rattus no
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AC10534 Rattus no
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AC10534 Rattus no
AC10534 Herpes simp
                   AF327403 Homo sapi
AJ303078 Homo sapi
AX061229 Sequence
AL353719 Human DNA
AX071440 Sequence
AC096351 Rattus no
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AC098461 Rattus no
AC097177 Rattus no
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1 (bases 1 to 1448)
1 (i.j.F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R., Larsson,C. and Suomalainen,A.
Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing proteins 3 and 4
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Copyright (c) 1993 - 2000 Compugen Ltd.
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2 (bases 1 to 1448)

Description

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Nikali K.;
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OIPSTAIAWSVYEFFKYLITKRQEEWRAGK
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Li,F., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R. Larsson,C. and Suomalainen,A. Direct Submission
Submitsed (08-DEC-2000) Human Molecular Genetics, National Public Health Institute, Mennerhelmintie 166, Helsinki 00300, Finland Location/Qualifiers
                                                                                               /note="similar to mitochondrial RNA splicing protein 3/4; alternatively spliced" /codon_start=1
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
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Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
FEBS Lett. 494:79-84(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens mRNA for mitochondrial RNA splicing protein 3/4 (HMRS3/4 gene), 1448 bp cDNA splice variant
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llarity 100.0%; Pred. No. 3.1e-83;
Conservative 0; Mismatches 0;
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67, Last updated, Version 2)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
LTMNVPFQAIHFMTYEFLOEHFNPQRRYNPSSHVLSGACAGAVAAAATTPLDVCKTLL
NTQESLALBIHTGHTTGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYE
FFKYLITRRQEEWRAGK"
1 508 c 544 g 433 t
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                                                                                                                    Indels
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                                                                                       Score 520.4; DB 9;
Pred. No. 3.4e-74;
0; Mismatches 1;
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(Rel. 67, Last updated, Version 2)
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                                                                                          89.48;
99.88;
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Best Local Similarity 99.89
Matches 521; Conservative
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Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /translation="MNPAEVVKQRMQMYNSPYHRVTDCVRAVWQNEGAGAFYRSYTTQ
                                                                                                                                                                                                                                                                                                                                                                                                         Aurolation linear PRI 02-MAY-200 Homo sapiens putative mitochondrial solute carrier splice variant mRNA, complete cds, alternatively spliced, nuclear gene for antochondrial product.
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Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (Dases 1 to 1889)
Li.F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B.,
Schweyen,R., Larsson,C. and Suomalainen,A.
Characterization of a novel human putative mitochondrial
transporter homologous to the yeast mitochondrial RNA splicing
Proteins 3 and 4
21195335
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                                                               gtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatg
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                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAK49520.1"
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Euteleostomi;

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123160 bp DNA linear PRI 25-SEP-2001
m clone RP11-85A1 on chromosome 10, complete
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Lal,P., Yang,J., Yue,H., Hillman,J.L., Tang,Y.T., Bandman,O., Burford,N., Baughn,M.R., Azimzai,Y., Lu,D.A., Au-Young,J. and Patterson,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 CGGGGGGCCGGCGCGGGGGAGGCCGGGGCCTGCAGGCCCCCGGTACGACAAGATCCGGA
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 123160)
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Pred. No. 1.3e-63;
                                                                                                                                                        Human transport proteins
Patent: WO 0078953-A 76 28-DEC-2000;
Incyte Genomics, Inc. (US)
Location/Qualifiers
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                                                                                                                                                                                                                                                                267
                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
176 c 351 g 267
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             GI:12406365
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98.7%;
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                                                                                                                                                                                                                                              /product="mitochondrial RNA splicing protein 3/4"
/function="putative mitochondrial solute carrier"
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QESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYEFFK
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                                   Life., Nikali K., Gregan J., Leibiger I., Leibiger B., Schweyen R.,
Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
FEBS Lett. 494:79-84(2001).
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99.8%; Pred. No. 3.4e-74;
ive 0; Mismatches 1;
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Sequence 76 from Patent WO0078953.
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Ramsay, H.

REFERENCE AUTHORS

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PAT 25-JAN-2001

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ACU96351 221062 bp DNA linear HTG 20-DEC-2001
Rattus norvegicus chromosome Rfl clone CH230-24M6, WORKING DRAFT
SEDQUENCE, 33 unordered pieces.
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Williams, L.T., Escobedo, J., Innis, M.A., Garcia, P.D., Klinger, J.,
Kassam, A., Feinhard, C., Randazoz, F., Kennedy, G.C., Pot, D.,
Lamson, G., Drmanac, R., Crkenjakov, R., Drmanac, S., Dickson, M.,
Labat, I., Leshkowitiz, D., Kita, D., Garcia, V. and Strache-Crain, B.
Patent: WO 0102568-A 1912 11-JAN-2001;
CHIRON CORPORATION (US): HYSEQ; INC. (US)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
  129 GGCCTGCCCACGCCCTTTATTTTGCCTGCTACGAAAAGTTAAAAAAGACATTGAGTGATG 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggaggatta 364
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                    Score 273; DB 6; I
Pred. No. 1.6e-34;
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100.0%; Pred. No. 1...
... 0; Mismatches
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/db_xref="taxon:9606"
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104 c 120 g
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_PHASE1; HTGS_DRAFT.
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             Libert Submitted (25-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire, Caudmitted (25-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerquest@sanger.ac.uk

On Sep 26, 2001 this sequence version replaced gi:14280413.

During sequence assembly data is compared from overlapping clones. Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality) as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em; EMBL; Sw; SWISSPROT; Tr:, TREMBL; WP:, WORMPEP; Information on the WORMPEP that the control of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     http://www.sanger.ac.uk/HGP/Chr10
RP11-85A1 is from the library RCI-11.1 constructed by the group of
Pieter de Jong. For further details see
http://www.chori.org/bacpac/home.htm
VECTOR: PBACe3.6
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The true left end of clone RPI1-85A1 is at 1 in this sequence. The true left end of clone RPI1-831811 is at 123061 in this sequence. The true right end of clone RPI1-129512 is at 51589 in this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 10, constructed by the Sanger Centre Chromosome 10 Mapping Group. Further information can be found at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91838
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    .123160
    /organism="Homo sapiens"
    /db_xref="taxon:9606"

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/clone_lib="RPCI-11.1"
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NOTE: This is a 'working draft' sequence. It currently consists of 33 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
Submitted (17-SEP-2001) Human Genome Sequencing Center, Department
of Molecular and Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
On Dec 20, 2001 this sequence version replaced gi:15627972.
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Consensus quality: 205303 bases at least Q30
Consensus quality: 209366 bases at least Q20
Estimated insert size: 209880; sum-of-contigs estimation
Quality coverage: Ox in Q20 bases; agarose-fp estimation
Quality coverage: 3.9x in Q20 bases; sum-of-contigs estimation
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------ Summary Statistics
Assembly program: Phrap; version 0.990329First call to
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Worley, K.C.
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JOURNAL
                 REFERENCE
                                         AUTHORS
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COMMENT

arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved. contig of 32851 bp in length gap of unknown length contig of 16033 bp in length gap of unknown length contig of 14731 bp in length gap of unknown length contig of 12090 bp in length gap of unknown length contig of 12090 bp in length gap of unknown length gap of unknown length contig of 11650 bp in length gap of unknown length gap of unknown length gap of unknown length 11011 bp in length 10862 bp in length in length bp in length Length unknown length of 6947 bp in 1 ength length Length length length ength length length ength length length ength ength ength ength ength length ength unknown length ength length length contig of 2082 b gap of unknown l contig of 1385 b unknown of 7436 l unknown of 5575 7329 7348 6654 4950 unknown unknown of 4785 4082 unknown 3702 2358 3838 2042 1569 unknown unknown contig of 1289 gap of unknown unknown unknown unknown unknown unknown unknown unknown gap of unknown contig of gap of unk 7 221062: contig of Location/Qualifiers contig gap of gap of gap of contig contig gap of gap of contig contig gap of gap of contig gap of contig gap of gap of contig gap of contiq 49084: 88841: 88941: 08945 63815: 63915: 76005: 216969: 29811

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Rattus norvegicus chromosome Rfl clone CH230-24M6, WORKING DRAFT
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       72925 CGGAGCCCCGGGGAGTCGGCGCTGCTGGACGGGTGCTGCAGCGGGGCGTGGCCCGGGGG 72984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72865 ATGGAGTTGGAGGGGCGGAGTGCAGGCGGCGTGGCGGGAGGACCAGCTGCTGGGCCCGGG 72924
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                                                                                                              3487 others
                                                                                                                                                                                                                                                                                                                          25; Indels
                                                                                                                                                                                                                                                   Score 251; DB 2;
Pred. No. 1.9e-31;
0; Mismatches 25;
                                                                      /clone="CH230-24M6"
50577 c 49732 g 58877 t
/db_xref="taxon:10116"
/chromosome="Rf1"
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HTG; HTGS_PHASE1; HTGS_DRAFT.
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91.4%;
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Rattus norvegicus
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VERSION SOURCE

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NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "vorking draft' sequence. It currently consists of 33 contigs. The true order of the pieces is not known and their order in this sequence record is
               Peery, J., Perez, L., Peters, L., Pickens, R., Primus, E., Pu, L. L., Ouiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Ruiz, S., Scott, G., Shen, H., Shooshtari, N., Stasery, G., Scherris, S., Scott, G., Shen, H., Shooshtari, N., Stoch, H., Stuch, R., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Stoch, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tamerisa, R., Tannes, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wall, R., Wang, S., Ward-Moore, S., Warren, R., Washington, C., Walliams, G., Williamson, A., Williams, G., Williamson, A., Walczyk, R., Wooden, S., Weistock, G. and Gibbs, R.
                                                                                                                                                                                                                                                                                                                                                Total to 221062)

Worley, K.C.

Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA

On Dec 20, 2001 this sequence version replaced gi:15627972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Consensus quality: 200164 bases at least Q40 Consensus quality: 205303 bases at least Q30 Consensus quality: 209366 bases at least Q30 Estimated insert size: 209880; sum-of-contigs estimation Quality coverage: Ox in Q20 bases; agarose-fp estimation Quality coverage: 3.9x in Q20 bases; sum-of-contigs estimation
Oguh, M., Okwuonu, G., Oragunye, N., Oviedo, R., Pace, A., Payton, B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ------- Summary Statistics
Assembly program: Phrap; version 0.990329First call to
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Center code: BCM
Web Site: http://www.hgsc.bcm.tmc.edu/
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ROD 27-OCT-2001

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                                                                                                          Mus musculus Eukaryota; Metzooa; Chordata; Craniata; Vertebrata; Euteleostomi; Marayota; Metzooa; Chordata; Sciurognathi; Muridae; Murinae; Mus. 1 (Dases 1 to 4112)
Li,Q.-Z., Ruan,Q.-G., Eckenrode,S., Shi,J.-D., Cruz,P., Wang,C.-Y. and She,J.-X.
A new gene which is highly expressed in NOD mice spleen Unpublished
                                                                                                                                                                                                                                                          Direct Submission
Submitted (20-JUL-2000) Pathology, University of Florida, 1600
Archer Road, Rm. D6-15, Gainesville, FL 32610, USA
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               224 GAGAACCTACCGACCGCCTGGTGTCCACCCACATGACAGGGGGAGCGAGGGGGGG 283
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                                                                                                                                                                                                                                                                                                                                                                                            /product="mitochondrial solute carrier-like protein"
/protein_id="AAL23859.1"
/db_xref="G1:16506178"
Mus musculus mitochondrial solute carrier-like protein mRNA, AF288621
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Li,Q.-Z., Shi,J.-D., Cruz,P., Echenrode,S., Ruan,Q.-G.
Wang,C.-Y.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 207.2; DB 10;
Pred. No. 3.7e-24;
0; Mismatches 178;
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                                                                                                                                                                                                                                                                                                    1. 4112
/organism="Mus musculus"
/db_xref="taxon:10090"
116. 1132
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                                                                    AF288621.1 GI:16506177
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/note="50E12"
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ilarity 64.4%;
Conservative
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Matches
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                                                        ACCESSION
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Pred. No. 5.5e-25;
0; Mismatches 14; Indels
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/db_xref="taxon:10116"
/chromosome="Rf1"
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/translation="MELRRGGVGNQAAGRRMDGDCRDGGCGSKDAGSEDYENLPTSAS
VSTHMTAGAMAGILEHSIMYPVDSVKTRMQSLNPDPKARYTSIYGALKRIMHTBGFWR
PLRGLNVMMMGAGPAHAMYFACYENWKRTLNDVFSHQGNSHLANGILKAFVWSWEALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear ROD 07-NOV-2001 protein mRNA, complete cds;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A novel mouse mitochondrial carrier protein gene is up-regulated
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SW Archer Road,
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Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A.
     383 TGCAGGGCCGGCCCATGCCATGTTTTGCCTGCTATGAAAACATGAAAAGGACTTTAAA
                                                                                                                                                                                                                                                                       480 tgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtggg
                                                         gcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggag
                                                                                                                             360 gattataagaacggagggcctatggaggcccatgaggggggctgaacgtcacagcaacagg
                                                                                                                                                 cgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgag
                                                                                                                                                                                                                                                                                                            443 TGACGTTTTCCACCACCACCAAGGAAACAGCCACCTAGCCAACGGGATAGCTGGGAGTATGGC
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/evidence=not_experimental
/product="mitochondrial carrier-like protein"
/db_xref="G1:1675528"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (15-MAR-2001) Department of Pathology, Laboratory Sciences, University of Florida, 1600 Room D6-15, Gainesville, FL 32610, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /map="between D14Mit124 and D14Mit236"
116. .664
                                                                                                                                                                                                                                                                                                                                              540 aacattacttcatgatgcagccatgaaccctgcggaag 577
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Pred. No. 1.7e-19;
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/organism="Mus musculus"
/strain="C57BL/6J"
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/chromosome="14"
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1 (bases 1 to 5869)
Li,Q., Eckenrode,S., Wang,C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          from young to adult NOD mice Unpublished
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/note="MCLP"
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63.6%;
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AUTHORS
                    203
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JOURNAL
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/product="ff015 protein"
/protein_id="AaF64141.1"
/db_xref="G1:7578783"
/tanslation="MelrSGSVGSQAVARRMDGDSRDGGGGRDATGSEDYENLPTSAS
/translation="MelrSGSVGSQAVARRMDGDSRDGGGGRDATGSEDYENLPTSAS
VSTHMTRGAMAGILEHSVMYPVDSVKTRMQSLSPDFKAQYTSIYGALKKIMTTEGFWR
PLRGVNVMIMGAGPAHAMYFACYENMKRTLNDVFHHQGNSHLANGIAGSMATLLHDAV
WNDAEVVRORLCMYNSQHRSALSCIRTVWRTEGLGAFYRSYTTQLTWNIPPTOSIHFIT
VEFLOEQVNPHRTYNPQSHISGGLAGALAAAATTPLDVCKTLLNTQENVALSLANIS
GRLSGBANAFRTYYQLMGLPATSKASRRVSSTRCPPPPFLGLSMSSSSTFSFSASWKI
ELHTKGRDHRIFS"
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A novel gene expressed in human hypothalamus
Unpublished
2 (bases 1 to 1429)
Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z.
Direct Submission
Submitsted (12-JAN-2000) Chinese National Human Genome Center at Shanghai, 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201203, China
                                                                                                                                                                                                                                                                                                                                        Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1429)
 GCGCACGCCATGTATTTGCCTGCTATGAAAACATGAAAAGGACTTTAAATGACGTTTTC 523
                                                      180
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Homo sapiens HT015 protein (HT015) mRNA, complete cds.
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llarity 62.7%; Pred. No. 9.6e-23;
Conservative 0; Mismatches 192;
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45. .1088
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1 (bases 1 to 3415)

Li,O.Z., Eckenrode,S., Ruan,Q.-G., Wang,C.-Y., Shi,J.-D., McIndoe,R.A. and She,J.-X.

McIndoe,R.A. and She,J.-X.

McCoclar cloning of a novel mictochondria solute carrier protein (MSCP) gene from mouse and human and its down-regulation in mouse spleen during the maturation of the immune system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (15-APR-2001) Department of Pathology, Immunology and Laboratory Sciences, University of Florida, 1600 SW Archer Road, Room D6-15, Gainesville, Florida 32610, USA Location/Qualifiers
                                                                                           249
                                                                                                                                                                                              344 AATCCAGATCCCAAAGCCCGGTATACAAGCATCTATGGCGCCCTCAAGAGGATCATGCAC 403
                                                                                                                                                                                                                                                                                                   goccacgcoctttattttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatc 489
                          gaggeceggggectgeaggececeggtaegaeaagateeggaetteeggeee---ggaetae 189
                                                                                                                                                        GAGAACCTACCGACCAGCGCCTCGGTGTCCACCACATGACAGCGGGAGCGATGGCCGGG 283
                                                                                                                                                                                atcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatgcagagtcta 309
                                                                                                                                                                                                                                  cagoctgacccagctgcccgctatcgcaatgtgttggaggccctctggaggattataaga 369
                                                                                                                                                                                                                                                                                   acggagggcctatggaggcccatgagggggctgaacgtcacagcaacaggcgcagggcct 429
                                                 GCGGGGCCGCGGATGGAGCTCCGCCGTGGCGCGTGGGGAACCAGGCTGCGGGCCGGAGG 163
 Gaps
                                                                                                                              gaggcqctgccggctggagccactgtcaccacgcacatggtggcaggcgcgtggcaggg
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 3;
 Indels
Mismatches 162;
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="8"
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Li,Q.-Z., Eckenrode,S., Ruz
McIndoe,R.A. and She,J.-X.
Direct Submission
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/gene="MSCP"
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/db_xref="G1:13774109"
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
1 (bases 1 to 858)
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IMAGE:3910567, mRNA,
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Pred. No. 7.1e-19;
); Mismatches 173;
       solute
/product="mitochondria
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62.4%;
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RS Muzny, D. M. Adams, C., Adio-Oducla, B., Ali-osman, F. R., Allen, C., Alstroby, D. M., Adams, C., Adio-Oducla, B., Ali-osman, F. R., Allen, C., Alstroby, D. M., Adams, C., Adio-Oducla, B., Ali-osman, F. Barks, T., Barbaria, J., Benton, J., Binage, K., Blankenburg, K., Bonnin, D., Bouck, J., Burker, C., Carcon, T. F., Carter, M. Carter, M. Carter, M. Carter, M. Carter, C., Carcon, T. F., Carter, M. Carter, M. Carter, C., Chen, R., Cayle, M. J., Dathorne, S. R., David, K. B., Deland, C. D., Cox, C., Coyle, M. D., Dathorne, S. R., David, K. R., Deland, C. D., Cox, C., Coyle, M. J., Dederch, D. Coyle, M. J., Dederch, D. Coyle, M. J., Deland, C. J., Carter, D. Coyle, M. J., Deland, C. J., Carter, D. Edwards, C. Elhaj, C., Escotto, M. Falls, T., Ferraguto, D., Flagg, N., Ford, J., Forster, P. Frantez, P., Gabls, A., Gao, J., Garcia, A., Ganner, T., Garza, N., Gill, R., Gorrell, J. H., Quevara, W., Gunaratne, P., Hale, S., Hernandez, J., Hernandez, O., Hoult, M., Havlak, S., Hume, J., Joudah, S., Karlsson, E., Jackson, L. E., Jacobson, B., Jar, Y., Johnson, R., Johnson, R., Malls, R., Homai, F., Homai, F., Howard, S., Khan, U., King, L., Korvah, J., Kovar, C., Kratovic, J., Kureshi, A., Landry, N., Leal, B., Lewis, L. C., Li, J., Li, J., Lilkarge, O., Lieu, C., Liu, J., Lil, J., Lilkarge, O., Lieu, C., Liu, J., Lil, J., Lilkarge, D., Martin, R., Mariney, E., Machiney, E., Weller, M., Morris, S., Moser, M., Naidwen, M., Pearls, S., Moser, M., Naidwen, M., Panker, S., Shen, H., Shlochkari, N., Sisson, I., Peters, L., Peters, L., Peters, L., Peters, L., Pickerson, E., Noven, W., Sisson, I., Sodergren, E., Sonaike, T., Tabor, P., Tamerisa, A., Tang, H., Tansey, M., Rail, Lang, M., Rail, L., Peters, L., Peters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (10-NOV-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA on Dec 20, 2001 this sequence version replaced gi:16901901.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Consensus quality: 127058 bases at least Q40 Consensus quality: 138264 bases at least Q30 consensus quality: 146548 bases at least Q20 Estimated insert size: 120308; sum-of-contigs estimation Quality coverage: Ox in Q20 bases; agarose-fp estimation Quality coverage: 1.9x in Q20 bases; sum-of-contigs estimation
                                                           Eukaryota; Métazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               * NOTE: Estimated insert size may differ from sequence length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center project Information
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                                 Rattus norvegicus
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SOURCE
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YSTHWTAGAAAAGILEHSVMYPVDSVKRRMQSLSPDPRAQYTSIYGALKKIMRTEGFWR
PLRGVNVMIAAGPAHAAMYRACYENMKRTLNDVFHHQGNSHLANGILKAFVWS"
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Rattus norvegicus clone CH230-84G11, *** SEQUENCING IN PROGRESS
                                                                                                                                                                                                                                                                                                               Clone distribution: MGC clone distribution information can be found
                   Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield, Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin, Letticia Hsiao, Martin Krzywinski, Reta Kutsche, Oliver Lee, Soo Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven Ness, Pawan Pandoh, Anna-Liisa Prabhu, Parvaneh Saeedi, Jacqueline Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott, Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
                                                                                                                                                                                                                                                                                                                                          through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 15 Row: h Column: 21
This clone was selected for full length sequencing because it
passed the following selection criteria: matched mRNA gi: 7706149.
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/protein_id="AAH15013.1"
/db_xref="GI:15929110"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29.6%; Score 172; DB 9; Length 85:
69.1%; Pred. No. 2e-18;
ive 0; Mismatches 105; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /tissue_type="Uterus, leiomyosarcoma"
/clone_lib="NIH_MGC_71"
/lab_host="DH10B"
/note="Vector: pCMV-SPORT6"
                                                                                                                                                                                                                                                 George Yang, Scott Zuyderduyn, Marco Marra.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:9606"
/clone="MGC:8764 IMAGE:3910567"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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HTG; HTGS_PHASE1.
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info@bcgsc.bc.ca
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(see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
                 NOTE: This is a working draft sequence. It currently consists of 71 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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an secreted pro n ORFX ORF2744

Human Human Human Human

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AAH89944 AAV84573 ABA83356 AAC77189 AAZ13026

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gene express immune/haema Mouse ischaemic co Aspergillus oryzae Drosophila melanog Human immune/haema immune/haema ORFX ORF2729 Primer used in the Primer used in the Human ovarian tumo Human IL-1ra BAC c CDNA sequence #574 Primer used in the DNA encoding novel DNA encoding novel Primer used in the

AAC77174 AAA02484 AAI84504 AAA38184 AAA38186 AAA38186

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Mouse ischaemic

ALIGNMENTS

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bone marrow immune/haema

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polynucleoti

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Human; uncoupling protein; immunosuppressive; antiarthritic;
antirheumatic; antiproliferative; cardiant; vasotropic;
cerebroprotective; neuroprotective, antibacterial; opthalmological;
gastrointestinal; nephrotropic; gynaecological; vulnerary; thrombolytic;
gene therapy; cancer; wound; infectious disease; thrombosis; arthritis;
infertility; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human uncoupling protein cDNA #6.
                                                                                                                                                                                                                                                                                                                                                                                                                                            AAC90457 standard; cDNA; 1336
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
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    227 tggtggcaggcgcgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcg
    286 tggtggcaggcgcgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcg
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                                                                                          Uncoupling proteins and nucleic acid sequences encoding them, useful for detecting, preventing and treating proliferative, neurological, immune system, cardiovascular and gastrointestinal disorders -
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 Rosen CA, Soppet DR;
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1336 BP; 333 A; 377 C; 358 G; 268 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 21;
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Pred. No. 2e-85;
0; Mismatches
                                                                                                                                                                    Claim 1; Page 306-307; 343pp; English.
Ni J, Komatsoulis G,
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99.8%;
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                                   2000-656322/63.
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immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antiniflammatory; antiviral; antibacterial; antiniflammatory; antiviral; antibacterial; antifungal; antitheumatic; antithyroid; antianaemic; gene therapy; cancer; proliferative disorder; hypertension; neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation; thrombosis; contraceptive; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      which represent the numan OREX.

which represent the numan OREX.

sequences have activities such as: cytostatic; hepatotropic; vulnerary, antipsortatic; antiparkinsonian; nootropic; neuroprotective; osteopathic; anticonvulsant; antiarthritic; immunosuppressant; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antidiabetic; hypotensive; dermatological; immunosuppressive; antidianatory; antibacterial; antidianal; antifhungal; antitheumatic; antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an OREX-associated disorder. The nucleic acids can be used to express OREX proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers,
anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypothyroidism, cholesterol ester storage, systemic lupus erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance
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05-APR-1999; 99US-0127728.
30-MAR-2000; 2000US-0540763.
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disorders such as cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; transport protein; TPPT; transport disorder; metabolic disorder;
neurological disorder; cardiovascular disorder; reproductive disorder;
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Patterson
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Au-Young J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 5; Page 160; 165pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BP.
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99US-0148177.
99US-0149357.
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1mmune disorder; cancer; ss.
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Azimzai Y,
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P-PSDB; AAB60113.
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Baughn MR,
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                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer peripheral nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemotactic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                             cggggggccggcgcgggggaggccggggcctgcaggccccggtacgacaagatccgga 61
                                                                                                                                                                                                                                                                                                             ccggatgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccct
                                                                                                                                                                                                                                                                                                                                                                                                                                              aacaggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaaagac
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                                               Length 1322;
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T; 0 other;
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                                                                            ; 9
                                            Score 454.4; DB Pred. No. 2e-82; 0; Mismatches
267
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C; 351
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2000US-0552317.
2000US-06298042.
2000US-0620312.
2000US-0653450.
BP; 328 A; 376
                                            78.1%;
Similarity 98.7%;
58; Conservative
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Sequence 1322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        leukaemia; ss
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19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
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                                                             Best Local Sim
Matches 458;
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AAS03906 standard; cDNA; 2502
                                     AAS03906
                                                                                                                                                                                                                                                                                                                    The invention relates to human nucleic acids (AAIS7798-AAI61369) and the encoded polypeptides (AAM3642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous system diseases, such as localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the Activitiantion of the activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, chemotactic/chemokinetic activity, haemostatic assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequence data for this patent did not form part of the printed
                                                                                               Ö
                                                                                               Wang
                                                                                                                                                                                                                             Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries -
                                                                                             Ren F, W
Zhang J;
                                                                                             Qian XB,
Yang Y,
                                                                                           Liu C, Asundi V, Chen R, Ma Y,
Wang Z, Wehrman T, Xu C, Xue AJ,
Zhou P, Goodrich R, Drmanac RT;
                                                                                                                                                                                                                                                                                    Claim 1; SEQ ID NO 4650; 10078pp; English.
19-OCT-2000; 2000US-0693036.
29-NOV-2000; 2000US-0727344.
                                                                                                                                                                       WPI; 2001-442253/47
                                                       (HYSE-) HYSEQ INC
                                                                                                                                                                                         P-PSDB; AAM41505
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Note: The sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   specification.
                                                                                           Tang YT,
Wang J, W
Zhao QA,
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Sequence 1294 BP; 267 A; 335 C; 368 G; 324 T; 0 other;

Human secreted protein; autoimmune disorder; hyperproliferative disorder;

Human secreted protein gene #25

(first entry)

29-AUG-2001

AAS03906;

cardiovascular disorder; cerebrovascular disorder; angiogenesis; nervous system disorder; bacterial infection; viral infection; ss; fungal infection; coular disorder; wound healing; tissue regeneration; epithelial cell proliferation; skin ageing; chemotaxis; IgG Fc region.

WO200123598-A1

05-APR-2001

ö 1294 CGGGGCCTGCAGGCCCCCGGTACGACAAGATCCGGACTCCGGCCCGGACTACGAGGCGCT 1235 317 377 138 cggggcctgcaggcccccggtacgacaagatccggactccggcccggactacgaggcgct 197 378 cctatggaggcccatgaggggctgaacgtcacagcaacaggcgcagggcctgcccacgc 437 cctttattttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatccaccctgg 497 Gaps 258 gcactgcgtgatgtaccccatcgactgcgtcaagacccggatgcagagtctacagcctga cccagctgcccgctatcgcaatgtgttggaggccctctggaggattataagaacggaggg ó Length 1294; Indels ; 75.6%; Score 440; DB 22; 100.0%; Pred. No. 1.5e-79; ive 0; Mismatches 0; agccatgaaccctgcggaag 577 AGCCATGAACCCTGCGGAAG 855 Conservative Query Match Best Local Similarity Matches 440; Conserv 318 438 498 558 Db õ g õ g ò g õ g ò d ò g ò

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Sequences AASO3873-AASO3922 represent isolated nucleic acid molecules and PCR primers of the invention. acid of the invention. Secreted proteins and their related nucleic acids can be used in the diagnosis of or susceptibility to a pathological condition by determining the presence or absence of a mutation in a nucleic acid or the presence or amount of a secreted protein. The sequences are used to prevent, treat or ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The antibodies to the polypeptides can also be used in alleviating symptoms associated with disorders and in diagnostic immunoassays or enzyme linked immunosorbent assays (ELISA). The disorders include autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative disorders e.g. choplasms of the breast or liver, cardiovascular disorders e.g. cardiac arrest, cerebrovascular disorders e.g. disease, infections caused by bacteria, viruses and fungi and ocular disorders e.g. corneal infection. The peptides can also be used to aid wound healing and epithelial cell proliferation, to help prevent skin ageing due to sunburn, to maintain organs before transplantation, to regenerate tissues, in chemotaxis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Forty one nucleic acid molecules encoding human secreted proteins, useful the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109 gtgggccggggggcgggcggggggggggccgggggcctgcaggcccccggtacgacaagat 168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169 ccggactccggcccggactacgagcgctgccggctggagccactgtcaccacgcacatg 228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7 gtgggccggggggccggcggggggggggggcctgcagg-cccnggtacgacaagat
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                                                                                                                                                                                                                                                                                                                                                                                                                                               (HUMA-) HUMAN GENOME SCI INC
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Matches 412; Conserv
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Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huenmostatic; amyotrophic lateral scleroals; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to human nucleic acids (AAI57798-AAI61369) and
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                          ccggactccggcccggactacgaggcgctgccggctggagccactgtcaccacgcacatg
                                                                                                               aagacccggatgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggag
                                                                                                                                          acagcaacaggcgcagggcctgcccacgccctttattttgcctgctacgaaagttaaaa
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Yang Y,
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Xu C, Xue AJ,
, Drmanac RT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acids and polypeptides, useful
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as central nervous system injuries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chen R,
                                                                                                                                                                                                                                                                                                             Human polynucleotide SEQ ID NO 1078.
                                                                                                                                                                                                                                                    BP
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Wehrman T, Xu
Goodrich R,
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2000US-0552317.
2000US-0598042.
2000US-0620312.
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2000US-0662191.
2000US-0693036.
2000US-0727344.
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                                                                                                                                                                                                                                                                                         (first entry)
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Wang Z, W
Zhou P,
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                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
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the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Hutington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, chemoteactic/chemokinetic activity, haemostatic and thrombolytic activity, chemoteactic/chemokinetic activity, haemostatic assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                   C.N.S disorders.
Note: The sequence data for this patent did not form part of the printed
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                                                                                                                                                                                                                                                                                                                      cggggcctgcaggcccccggtacgacaagatccggactccggcccggactacgaggcgct 197
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Pred. No. 3.1e-71;
); Mismatches 19; Indels 1;
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cancer; cancer detection;
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Best Local Similarity 95.5%;
Matches 421; Conservative (
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cancer; lung
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Human immune/haematopoietic antigen genomic sequence SEQ ID NO:24591.
                                                                                                                                                                   immune; haematopoietic; immune/haematopoietic antigen; cancer;
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14-AUG-2000;
14-AUG-2000;
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22-AUG-2000;
06-NOV-2001
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30-AUG-2000;
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    \texttt{C} \times 
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mson G, Drmanac R;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                Reinhard C, Randazzo F, Kennedy GC, Pot D, Lamson G, Drmana
Crkenjakov R, Drmanac S, Dickson M, Labat I, Leshkowitiz D;
Kita D, Garcia V, Jones LM, Strache-Crain B;
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                                                                                                                                                               99US-0142310.
99US-0142311.
                                                                             30-JUN-2000; 2000WO-US18374
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Reinhard C,
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02-JUL-1999;
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AAK69779 standard; DNA; 27960 BP

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2000US-0237037.
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2000US-0241826.
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08-DEC-2000;
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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) anino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome expression by rectifying mutations or deletions in a patient's genome complement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, clagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived calls. AAK64703 to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK84942 to AAK8960 and AAM82169 to represent invention. AAK84942 to AAK8960 and AAM82169.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      18263 tgcgcttctccttgctgtaatttcagacccggatgcagagtctacagcctgacccagctg 18322
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                                                                                                                                                                                                                                                                                                          Disclosure; SEQ ID NO 24591; 3071pp + Sequence Listing; English.
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                                                                                                                                                       Ruben SM;
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                                                                                                                 (HUMA-) HUMAN GENOME SCI INC
                   2000US-0251989.
2000US-0251990.
2000US-0254097.
2000US-0251869
                                                                           05-JAN-2001; 2001US-0259678
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Matches 242; Conservative
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                 08-DEC-2000; 2
08-DEC-2000; 11-DEC-2000;
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8. - DEC - 2000)
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-NOV-2000;
                  Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
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2000US-0180628.
2000US-018664.
2000US-0189874.
2000US-0189874.
2000US-0198123.
2000US-0205515.
2000US-020567.
2000US-020567.
2000US-020567.
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2000US-0217496
2000US-0220963
2000US-0220964
2000US-0224518
2000US-0224519
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2000US-0233065.
2000US-0234223.
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23-AGG-2000;

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14-SEP-2000;

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14-SEP-2000;
21-SEP-2000;
                                                                              Homo sapiens.
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2000US - 0234998 2000US - 0235834 2000US - 0235834 2000US - 0235836 2000US - 02353636 2000US - 02353636 2000US - 02353636 2000US - 02353636 2000US - 02363637 2000US - 0237037 2000US - 0237039 2000US - 0237039 2000US - 0241808 2000US - 0241808 2000US - 024677 2000US - 0246528 2000US - 0246521 2000US - 0249218 2000US - 0249218 2000US - 0249218

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                                                                                                                                                                                                     AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
activity, and can be used in gene therapy and vaccine production. (I)
proteins and polynucleotides may be used in the prevention, diagnosis and
treatment of diseases associated with inappropriate (I) expression. For
example, they may be used to treat disorders associated with decreased
expression by rectifying mutations or deletions in a patient's genome
that affect the activity of (I) by expressing inactive proteins or to
supplement the patients own production of (I). Additionally, (I)
c polynucleotides may be used to produce the secreted (I), by inserting
the nucleic acids into a host cell and culturing the cell to express the
protein. (I) proteins and polynucleotides may be used to prevent,
diagnose and treat immune/haematopoietic-derived cells. AAK64703
cancers and cancer metastases of haematopoietic artigen genomic
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                                                                                                                                                                                                                                                                                                                                                                                                                                          the present invention
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                                                                                                                         Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and
                                                                                                                                                                                                                                                                                                                                                                                                              to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK54942 to AAK54950 and AAM82169
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                                                                                                                                                                               Disclosure; SEQ ID NO 28132; 3071pp + Sequence Listing; English
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40.0%; Score 233; DB 22; Length 27960;
Best Local Similarity 94.2%; Pred. No. 5.6e-38;
Matches 242; Conservative 0; Mismatches 15; Indels 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                       represent sequences used in the exemplification of
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                                        (HUMA-) HUMAN GENOME SCI INC.
11-DEC-2000; 2000US-0254097. 05-JAN-2001; 2001US-0259678.
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                                                                    Barash SC,
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Best Local Similarity
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The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to eytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity, tissue growth factor activity, immunomodulatory activity and activity inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing were missing at the time of publication.
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tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
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Pred. No. 1.7e-31;
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Wejhrman T, Goodrich R;
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62.9%; Pred
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2000US-0560875.

2000US-0590875.

2000US-0620325.

2000US-064936.

2000US-0693325.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang D,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tang YT, Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB; AAM79039
                                                                                                                                                         WO200157190-A2
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01-SEP-2000;
15-SEP-2000;
20-OCT-2000;
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20-JUN-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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tgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtggcaac 542
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                                      gagtetacageetgaeeecagetgeeegetategeaatgtgttggaggeeetetggaggat
                                                            gagtttgagtccagatcccaaagcccagtacacaagtatctacggagccctcaagaaaat
                                                                                     tataagaacggaggcctatggaggcccatgaggggggctgaacgtcacagcaacaggcgc
                                                                                                 agggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgagtga
                                                                                                                                                                                                                                       543 attacttcatgatgcagccatgaaccctgcggaag 577
                                                                                                                                                                                                                                                       Human bone marrow cDNA, SEQ ID NO: 301.
                                                                                                                                                                                                                                                                                                                               AAH90057 standard; cDNA; 2562
                                                                                                                                                                                                                                                                                                                                                                                (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-488707,
P-PSDB; AAM00938
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200153453-A2
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03-AUG-2000;
14-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-JUL-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a novel human mitochondrial solute carrier protein, hMSC-o (AAB60658), and cDNA encoding it (AAF59920). hMSC-o is expressed in normal human hypothalamus tissue. The invention also relates to the preparation of hMSC-o proteins and nucleic acids, and the detection of hMSC-o proteins and nucleic acids, in a sample. The present sequence represents cDNA encoding hMSC-o.
                                                                                                gcagagtttgagtccagatcccaaagcccagtacacaagtgtctacggagccctcaagaa 1339
                                                                                                                                                 479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New human mitochondrion solute carrier protein and its nucleic acid
                                               ggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgccgt
                                                                                    cgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgag
                                                                                                                                    gattataagaacggaggcctatggaggcccatgagggggttgaacgtcacagcaacagg
                                                                                                                                                                                                                                                                                                                                                                               ondrial solute carrier protein; hMSC-o; hypothalamus; detection; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1305;
                                                                                                                                                                                                                                                                                                                                                      Human mitochondrial solute carrier protein hMSC-o cDNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 22;
                                                                                                                                                                                   33.8%; Score 196.6; DB 2;
68.6%; Pred. No. 9.5e-31;
iive 0; Mismatches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HUMAN GENE GROUP.
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                                                                                                                                                                                                                                                                             ВР
                                                                                                                                                                                                                                                                            AAF59920 standard; cDNA; 1305
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17-MAR-2000; 2000CN-0114958
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                                                                                                                                                                                                                                                                                                                                                                               mitochondrial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 271; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-PSDB; AAB60658
                                                                                                                                                                                                                                                                                                                                                                                            preparation;
                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                              04-MAY-2001
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                                                                                                                                                                                                                                                                                                  AAF59920;
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numan immunodeficiency virus; HIV; autoimmune disorder; haemophilia; ss.
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Human; bone marrow; antlinflammatory; cytostatic; neuroprotective; antlyvial; antlibacterial; antlibungal; anti-HTV; hameostatic; immunosuppressive; per therapy; cytokine cell proliferation; cell differentiation modulator; immune disorder; infection; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   V, Chen R, Ma
Yang Y, Zhang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is one of 251 novel human polynucleotides expressed in the bone marrow. The polynucleotide and the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3J, Tang YT, Liu C, Asundi
Werhman T, Xu C, Xue AJ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhou P, Drmanac RT;
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2000US-055317
2000US-0598042.
2000US-0653150.
2000US-0653150.
2000US-0653150.
2000US-0653150.
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ggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatgca 302

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14-AUG-2000; 2000US-0225214.
14-AUG-2000; 2000US-0225266.
14-AUG-2000; 2000US-0225267.
14-AUG-2000; 2000US-0225267.
14-AUG-2000; 2000US-0225270.
14-AUG-2000; 2000US-0225757.
14-AUG-2000; 2000US-0225758.
14-AUG-2000; 2000US-0225759.
18-AUG-2000; 2000US-0225759.
18-AUG-2000; 2000US-0225759.
22-AUG-2000; 2000US-0226681.
22-AUG-2000; 2000US-0226681.
22-AUG-2000; 2000US-0226681.
23-AUG-2000; 2000US-0226681.
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                                                                                                                                                                                               11.JUL-2000; 2000US-0217496.
14.JUL-2000; 2000US-0218290.
26.JUL-2000; 2000US-0220963.
14.AUG-2000; 2000US-0220964.
14.AUG-2000; 2000US-0224118.
14.AUG-2000; 2000US-024519.
                                                                                        20000S-0209467
20000S-021686
20000S-021687
20000S-021687
20000S-0216880
20000S-0217487
20000S-0217496
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01-SEP-2000; 2000US-0229345
05-SEP-2000; 2000US-0229509.
                                                           2000US-0198123
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       02-MAR-2000; 2
16-MAR-2000; 2
18-APR-2000; 2
19-MAY-2000; 2
19-MAY-2000; 2
28-JUN-2000; 2
30-JUN-2000; 2
07-JUL-2000; 2
11-3UL-2000; 2
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02-OCT-2000;
02-OCT-2000;
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polypeptide encoded by it are useful in the treatment of various immune deficiencies and disorders. The deficiencies and disorders may be genetic, may be caused by a viral (e.g. HIV), bacterial or fungal infection, or may result from an autoimmune disorder, a coagulation disorder (e.g. haemophilia), inhibition of tumour cell proliferation, suppression of an inflammatory response or treatment of a nervous system disorder such as Alzheimer's disease. Detection of the presence or increased expression of the polynucleotide or the protein it encodes is useful for the diagnosis and/or prognosis of one or more types of cancer. The polynucleotide and polypeptide can be used as nutritional sources or supplements and in the screening of chemical compounds as potential drugs.
                                                                                                                                                                                                                                                                                                                                                                           1980 agcactcggtcatgtacccggtggactcggtgaagacacgaatgcagagtttgagtccag 2039
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2160 ccatgtattttgcctgctatgaaaacatgaaaaggactttaaatgacgttttccaccacc 2219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2220 aaggaaacagccacctagccaacgggatagctgggagtatggccaccctgctccacgatg 2279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           317 acccagctgcccgctatcgcaatgtgttggaggccctctggaggattataagaacggagg 376
                                                                                                                                                                                                                                                                                                                                                                                                                        257 agcactgcgtgatgtaccccatcgactgcgtcaagacccggatgcagagtctacagcctg 316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ccctttattttgcctgctacgaaagttaaaaagacattgagtgatgtaatccacctg 496
                                                                                                                                                                                                                                                                                                                                                       197 tgccggctggagccactgtcaccacgcacatggtggcaggcgccgtggcagggatcctgg 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; immune; haematopoietic; immune/haematopoietic antigen; cancer;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2040 atcccaaagcccagtacacaagtatctacggagccctcaagaaaatcatgcggaccgaag
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                                                                                                                                                                                                                                                                                  Query Match 32.2%; Scoré 187.4; DB 22; Length 2562; Best Local Similarity 68.2%; Pred. No. 6.9e-29; Matches 260; Conservative 0; Mismatches 121; Indels 0;
                                                                                                                                                                                                                                   Sequence 2562 BP; 623 A; 660 C; 627 G; 652 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cytostatic; gene therapy; vaccine; metastasis; ss.
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04-FEB-2000; 2000US-0180628.
24-FEB-2000; 2000US-0184664.
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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
activity, and can be used in gene therapy and vaccine production. (I)
proteins and polynucleotides may be used in the prevention, diagnosis and
treatment of diseases associated with inappropriate (I) expression. For
example, they may be used to treat disorders associated with decreased
expression by rectifying mutations or deletions in a patient's genome
that affect the activity of (I) by expressing inactive proteins or to
supplement the patients own production of (I). Additionally, (I)
concludedides may be used to produce the secreted (I), by inserting
the nucleic acids into a host cell and culturing the cell to express the
protein. (I) proteins and polynucleotides may be used to prevent,
diagnose and treat immune/haematopoietic-related diseases, especially
cancers and cancer metastases of haematopoietic antigen genomic
to AAK87694 represent human immune/haematopoietic antigen genomic
sequences from the present invention. AAK54942 to AAK64950 and AAM82169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gaccoggatgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggc 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cctctggagagtattataagaacggaggcctatggaggcccatgagggggctgaacgtcac 410
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Wakamatsu A, Sugiyama T, Nagai K, Kojima S, Otsuki T, Koga H;
                                                                                                                                                                                                                                                                                                                                                                                                           31.1%; Score 181; DB 22; Length 339; 95.1%; Pred. No. 1.2e-27; ive 1; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; full length cDNA; cDNA synthesis; oligo-capping; ss.
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11-JAN-2000; 2000JP-0118774.
02-MAY-2000; 2000JP-0183765.
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Matches 195; Conservative
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2000US-0241786.
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P-PSDB; AAM85891.
                                13-0CT-2000; 20-0CT-2000; 20-0C
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01-DEC-2000; 2
05-DEC-2000; 2
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99JP-0194486. 2000JP-0118774. 2000JP-0183765.

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Search completed: September 28, 2002, 08:05:43 Job time: 11538 sec
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02-MAY-2000;
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                                                                                    The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nuclectide sequences of 5'-and of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is a full length were income.
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                            and their
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                                                                                                                                                                                                                   Note: The sequence data for this patent did not form part of the p
specification, but was obtained in CD-ROM format directly from EPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                            -ccggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgc
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                                                                                                                                                                                                                                                                                                   Length 1890;
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                        830 Primers useful for synthesizing full length cDNA clones
                                                              Claim 8; SEQ ID NO 4109; 1380pp + sequence listing; English
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                                                                                                                                                                                                                                                                                                                            0; Mismatches 173; Indels
                                                                                                                                                                                                                                                            Sequence 1890 BP; 441 A; 534 C; 496 G; 419 T; 0 other;
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                                                                                                                                                                                                                                                                                                   Score 174.2; DB 22;
                                                                                                                                                                                                                                                                                                                  Pred. No. 3e-26;
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62.4%;
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                                       in genetic manipulation
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Best Local Similarity 62.4
Matches 289; Conservative
 P-PSDB; AAM93934
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The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been soluted and nucleotide sequences of 5'— and 3'—ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA assily without any special methods. The present sequence is the nucleotide sequence of the 5'-end of a cDNA provided in the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
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                                                         Hayashi K, Ishii S, Kawai Y;
K, Kojima S, Otsuki T, Koga
                                                                                                                                                                                                               Primers useful for synthesizing full length cDNA clones and
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                                                                                                                                                                                                                                                                                                     Claim 2; SEQ ID NO 817; 1380pp + sequence listing; English.
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0; Mismatches 104; Indels
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                                                                                            Wakamatsu A, Sugiyama T, Nagai
                                                            Isogai T,
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(HELI-) HELIX RES INST.
                                                            Nishikawa T,
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36, Appl 1, Appli 1, Appli 1, Appli 11, Appli 11, Appli

Sednence Sed

1, Appli 3, Appli 7, Appli Appl

Sequence Sequence Sequence Sequence

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gagccccgggggagtcggcgctgctggacgggtggctgcagcgggggcgtgggccgggggggc 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: Description of Artificial Sequence:Primer sequence US-09-165-264-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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Sequence 8, Application US/09165264

Sequence 8, Application US/09165264

Patent No. 6197510

GENERAL INFORMATION:

TITLE OF INVENTION: Multi-Loci Genomic Analysis

FILE REFERENCE: 44747

CURRENT FILLING DATE: 1998-10-01

NUMBER OF SEQ ID NOS: 14

SEQ ID NO 8

LENGTH: 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 62.4; DB 4; Pred. No. 8.5e-06; O; Mismatches 56;
US-09-283-471A-39
US-08-658-136-2
US-08-4658-136-1
US-08-483-533-36
US-09-283-471A-36
PCT-US91-06532-1
US-08-118-06532-1
US-08-118-15-1
US-08-458-568A-11
US-09-45-283-1
US-09-773-816-1
US-09-773-816-1
US-09-773-816-1
US-09-773-816-1
US-09-773-816-1
US-09-7751-891B-24
US-09-236-097-7
US-08-658-8838-1
US-08-658-8838-1
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US-08-658-8838-1
US-08-658-8838-1
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Patent No. 6197510
GENERAL INFORMATION
GENERAL INFORMATION
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
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                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 10.7%;
Best Local Similarity 63.2%;
Matches 96; Conservative
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  US-09-165-264-12
  TYPE: DNA
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Sequence 1, Appli
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                                                                                                                                               1 atggagttggaggggggggggggggggggaacctgcggaaggctga 582
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Sequence 39,
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/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6A_COMB.seq:*
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/cgn2_6/ptodata/2/ina/PCTUS.COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS.COMB.seq:*
            version 4.5 - 2000 Compugen Ltd
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US-09-165-264-11
US-08-403-255-3
US-08-510-646B-3
US-08-231-818-3
US-08-231-818-1
US-08-231-818-1
US-08-231-818-1
US-08-231-818-1
US-08-903-800A-1
US-08-130-114-2
US-08-130-114-2
US-08-69-473-1
US-08-69-473-1
US-08-684-659-1
US-08-458-568A-11
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US-09-103-840A-1
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US-09-128-155-16
US-09-165-264-7
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US-08-893-333-1
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US-08-903-800A-4
US-08-483-533-39
                                                                                                                                                                                                  383533 seqs, 122816752 residues
                                                                             September 28, 2002, 04:48:35
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Maximum Match 100%
Listing first 45 summaries
                                                        nucleic search, using sw model
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Gapop 10.0 , Gapext 1.0
            GenCore
Copyright (c) 1993
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length: 2000000000
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Sequence:

Run on:

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                                                                                                                    10.0%; Score 58.2; DB 4; Length 318; 61.6%; Pred. No. 7.4e-05; tive 0; Mismatches 58; Indels (
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Pred. No. 7.4e-05;
0; Mismatches 138; Indels
                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OE INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO. 14
LENGTH: 320
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US-09-165-264-14
Sequence 14, Application US/09165264
Patent No. 6197510
                          TYPE: DNA
ORGANISM: Artificial Sequence
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Best Local Similarity 50.5%;
Matches 141; Conservative
                                                                                                                                                 Conservative
                                                                                                                      Query Match
Best Local Similarity
Matches 93; Conserva
SEQ ID NO 12
LENGTH: 318
                                                     FEATURE:
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GENERAL INFORMATION:
APPLICANT: Pan, Yang
TITLE OF INVENTION:
FILE REFERENCE: 09404/052001
CURRENT APPLICATION NUMBER: US/09/128,155
CURRENT APPLICATION NUMBER: US 60/091,650
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER PELING DATE: 1998-07-02
EARLIER PILING DATE: 1998-07-02
EARLIER PILING DATE: 1998-07-03
SOFTWARE: FALSO NUMBER: US 60/054,646
EARLIER PILING DATE: 1997-08-04
NUMBER OF SEQ ID NOS: 18
SOFTWARE: FALSO FOR WINDOWS VERSION 3.0
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; Sequence 7, Application US/09165264
; Patent No. 6197510
; GENERAL INFORMATION:
APPLICANT: Vinayagamoorthy, Thuraiayah
; TILLE OF INVENTION: Multi-Loci Genomic Analysis
; FILE REFERENCE: 44747
; CURRENT APPLICATION NUMBER: US/09/165,264
; CURRENT FILING DATE: 1998-10-01
; NUMBER OF ESQ ID NOS: 14
; SEQ ID NO 7;
; FENCENT OF THE OF TH
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Pred. No. 9.1e-05;
0; Mismatches 57;
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Sequence 16, Application US/09128155 Patent No. 6117654
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; LCCATION: (1)...(15331)
; OTHER INFORMATION: n = A,T,C or G
US-09-128-155-16
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TYPE: DNA
ORGANISM: Artificial Sequence
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55.1%;
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Best Local Similarity 55.1<sup>s</sup>
Matches 114; Conservative
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Best Local Similarity 61.7'
Matches 92; Conservative
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TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
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US-09-165-264-7
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Best Local Similarity 61.9
Matches 91; Conservative
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 ; OTHER INFORMATION: Description of Artificial Sequence:Primer sequence US-09-165-264-13
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Pred. No. 0.0001;
0; Mismatches 69; Indels
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APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 4474ABER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SEQ ID NO 11
LENGTH: 320
                                                                                                                                                                                                                                                                  APPLICANT: Vinayagamoorthy, Thuraiayah TITLE OF INVENTION: Multi-Loci Genomic Analysis FILE REFERENCE: 44747
CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SEQ ID NO 13
LENGTH: 320
                                                                                                                      123 cggcggcggggaggccgggggcctgcaggc 151
                                                                                                                                               Sequence 13, Application US/09165264 Patent No. 6197510 GENERAL INFORMATION:
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Patent No. 6197510
                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: Artificial Sequence
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Best Local Similarity 58.9%;
Matches 99; Conservative
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US-09-165-264-13
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DB 4; Length 320

9.9%; Score 57.4;

Query Match

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Debussche, Laurent
De Crecy-Lagard, Valerie
De Crecy-Lagard, Valerie
NVENTION: Polypeptides Involved In The
NVENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
NVENTION: Coding For These Polypeptides And Their Use
                                                                                                                                                             63 gagccccgggggagtcggcgctgctggacgggtggctgcagcgggggcgtgggccggggggc 122
                                                                                                                       Gaps
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1300 I Street, N.W., Suite 700
Pred. No. 0.00011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Meyers, Kenneth J.
REGISTRATION NUMBER: 25,146
REGISTRAPOCKET NUMBER: 03806.0054-00000
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000
                                        0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/403,852D FILING DATE: 10-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92/11441
                                                                                                                                                                                                                                            123 cggcggcgggaggccggggcctgcag 149
                                                                                                                                                                                                                                                                                    278 ggggggggggggggggggggggcag 304
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; Patent No. 5891695
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nathalie
Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Blanche, Francis
Crouzet, Joel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Denis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (202) 408-4400 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 833 base pairs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: doub
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TITLE OF INVENTION:
TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 20005-3315
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                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Blanc,
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ORIGINAL SOURCE
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APPLICANT: Blanc, Veronique
APPLICANT: Blanche, Francis
APPLICANT: Crouzet, Joel
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TITLE OF INVENTION: B:
TITLE OF INVENTION: CC
NUMBER OF SEQUENCES:
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Matches 133; Conserv
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                                                                                                                                                                                                                                               HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                ; NAME/KEY:
; LOCATION:
US-08-510-646B-3
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TITLE OF INVENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESSEE: Finnegan, Henderson, Farabow, Garrett & Dunner
STREET: 1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                              119 gggccggcggcggggggccggggcctgcaggcccccggtacgacaagatccggactccg 178
                                                                                                                                   Gaps
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                                                                                               Score 50.6; DB 2; Length 833;
Pred. No. 0.0043;
0; Mismatches 114; Indels
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PELLIATION NUMBER: US/08/510,646B FILING DATE: 03-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION UNBABR: US 08/403,852
FILING DATE: 10-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Debussche, Laurent
De Crecy-Lagard, Valerie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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; Patent No. 6077699
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Crouzet, Joel
APPLICANT: Jaques, Nathalie
APPLICANT: Lacroix, Patricia
APPLICANT: Thibaut, Denis
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Blanche, Francis
Crouzet, Joel
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                                                                                              Query Match
Best Local Similarity 53.0°
Matches 133; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                              239 ccgtggcaggg 249
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                                1..833
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
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             ; NAME/KEY:
; LOCATION:
US-08-403-852D-3
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APPLICANT:
APPLICANT:
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APPLICANT:
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FEATURE:
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De Crecy-Lagard, Valerie
VENTION: Polypeptides Involved In The
VENTION: Blosynthesis Of Streptogramins, Nucleotide Sequences
VENTION: Coding For These Polypeptides And Their Use
EQUENCES: 43
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STREET: 1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 833;
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53.0%; Pred. No. 0.0043;
tive 0; Mismatches 114;
ATORING MARE MAYERS, Kenneth J.
REGISTRATION UNBER: 25,146
REFERENCE/DOCKET NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-01000
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4400
TELEFAX: (202) 408-4400
TELEFAX: (202) 408-4400
TELEFAX: C202) 408-400
TELEFAX: 202) 408-400
TELEFAX: 100-200
SEQUENCE ANALOR OF ANALO
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; Sequence 3, Application US/09231818
; Patent No. 6171846
; GENERAL INFORMATION:
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APPLICANT: Jacques, Nathalie
APPLICANT: Lacroix, Patricia
APPLICANT: Thibaut, Denis
APPLICANT: Zagorec, Monique
APPLICANT: Debussche, Laurent
APPLICANT: De Crecy-Lagard, Va
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Zagorec, Monique
Debussche, Laurent
De Crecy-Lagard, Valerie
NVENTION: Polypeptides Involved In The
NVENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
NVENTION: Coding For These Polypeptides And Their Use
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Pred. No. 0.0058;
0; Mismatches 114; Indels 4
                                                                                                                                                                                                                                                  ADDRESSEE: Finnegan, Henderson, Farabow, Garrett & Dunner STREET: 1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/403,852D FILING DATE: 10-MAY-1995 PRIOR APPLICATION DATA: PAPLICATION NUMBER: PCT/FR 93/00923 FILING DATE: 25-SEP-1993 PRIOR APPLICATION NUMBER: FR 92/11441 APPLICATION NUMBER: FR 92/11441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: Meyers, Kenneth J.
REGISTRATION UNDABER: 25,146
REPERENCE/DOCKET UNDABER: 03801
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000
TELEFAX: (202) 408-4000
INFORMATION FOR SEQ ID NO: 1:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
                                  Nathalie
                                                         Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 8.7%;
Best Local Similarity 53.0%;
Matches 133; Conservative (
Francis
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ATTORNEY/AGENT INFORMATION:
                                                                         Denis
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                    Crouzet, Joel
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EDNESS: double
                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                      Jacques,
                                                                           Thibaut,
                                                         Lacroix,
                                                                                                                                                  TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                         CITY: Washington
                                                                                                                                                                                                                                                                                                                                                  20005-3315
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                                                                       APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
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                                                                                                          SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                             NAME: Meyers, Kenneth J.

REGISTRATION NUMBER: 25,146

REGISTRATION NUMBER: 03806.0054-00000

TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000

TELEPHONE: (202) 408-4000

INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 833 base pairs
TENGTH: 833 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 10-MAY-1995
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
FILING DATE: 25-SEP-1993
APPLICATION NUMBER: FR 92/11441
FILING DATE: 25-SEP-1992
ATTORNEY AGENT INFORMATION:
                                                                                                                                                APPLICATION NUMBER: US/09/231,818 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1, Application US/08403852D
; Patent No. S981695
; GENERAL INFORMATION:
APPLICANT: Blanc, Veronique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: S.pristinaespiralis
                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
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                                                                                     OPERATING SYSTEM:
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Best Local Similarity
Matches 133; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGINAL SOURCE:
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US-08-403-852D-1/C
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APPLICANT: Thibaut, Denis
APPLICANT: Zagorec, Monique
APPLICANT: Debussche, Laurent Laurent
APPLICANT: Debussche, Laurent Laurent
APPLICANT: De Crecy-Lagard, Valerie
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Biosynthesis of Streptogramins, Nucleotide Sequences
TITLE OF INVENTION: Goding For These Polypeptides And Their Use
NUMBER OF SEQUENCES: 43
                                    3418 ceaccadaccedercerceadaecedreadececacereaadecercecedegecrer 3359
                                                                                                                                                                                                                                                          3358 CGGCGGCAGTTCGGCGGCCGGGCCGGGCAGCGCAGGAGGATCTTGGCGTGCGGTGCCT 3299
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                                                                                                                                                                                                        63 gagec----cegggggagteggegetgetggaegggtggetgeageggggegtgggeeggg 118
     179 goccoggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcg
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STREET: 1300 I Street, N.W., Suite 700
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APPLICATION NUMBER: US/09/231,818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03806.0054-00000
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FILING DATE: 10-MAY-1995
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA: APPLICATION NUMBER: FR 92/11441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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REGIETRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4400
INFORMATION FOR SED ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application US/09231818
Patent No. 6171846
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Jacques, Nathalie APPLICANT: Lacroix, Patricia
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Blanche, Francis
Crouzet, Joel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5392 base pairs
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PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             3238 CGAGGGCGGG 3228
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APPLICANT: Jacques, Nathalie
APPLICANT: Lacroix, Patricia
APPLICANT: Thibat, Denis
APPLICANT: Tagorec, Monique
APPLICANT: Debussche, Laurent
APPLICANT: De Crecy-Lagard, Valerie
APPLICANT: De Crecy-Lagard, Valerie
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
CORRESPONDENCE: 45
CORRESPONDENCE: ADDRESS:
ADDRESSE: Finnegan, Henderson, Farabow, Garrett & Dunner
STREET: 1300 I Street, N.W., Suite 700
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53.0%; Pred. No. 0.0058;
Live 0; Mismatches 114; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/510,646B
FILING DATE: 03-40G-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/403,852
FILING DATE: 10-MAY-1995
PRIOR APPLICATION NUMBER: PCT/FR 93/00923
APPLICATION NUMBER: PCT/FR 93/00923
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR 91/0923
PRIOR APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Meyers, Kenneth J. REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-01000
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                            Sequence 1, Application US/08510646B Patent No. 6077699 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S.pristinaespiralis
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TELEFAX: (202) 408-4400
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5392 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                       Blanc, Veronique
Blanche, Francis
Crouzet, Joel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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Matches 133; Conservative
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20005-3315
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239 ccgtggcaggg
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ORGANISM: S.P
US-08-510-646B-1
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APPLICANT:
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STATE:

Query Match

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STRANDEDNESS:
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                    TOPOLOGY:
                                                                   NAME/KEY:
                                                                                    LOCATION:
                                                                                                                                   LOCATION:
                                                                                                                                                                                   LOCATION:
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; LOCATION:
US-08-804-227C-1
                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                 LOCATION:
                                                                                                                                                    FEATURE:
NAME/KEY:
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                                                                                                                                                                                                                                                                                                               63 gagcc---ccggggagtcggcgctgctggacgggtggctgcagcggggcgtgggccggg 118
                                                                                                                                                                                                                                               179 geceggactacgaggegetgeeggetggageeactgteaceaegeacatggtggeaggeg
                                                                                                                                                                               Query Match 8.7%; Score 50.6; DB 4; Length 5392; Best Local Similarity 53.0%; Pred. No. 0.0058; Matches 133; Conservative 0; Mismatches 114; Indels 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INCRMATION:
GENERAL INCRMATION:
APPLICANT: Defloff, Bradley S.
APPLICANT: Robitoss, Stuart A.
APPLICANT: Rotton, Kimberty L.
TITLE OF INVENTION: POLYKETIDE SYNTHASE GENES
NUMBER OF SEQUENCES: 15
CORRESSEDNINGER ADDRESS:
ADDRESSEE: THOMAS G. PLANT 1501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM COMPAtible
OPERATING SYSTEM: MS-DOS
SOFTWARE: ASCITOOS) Text only
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/804,227C
FILING DATE: FEBRUARY 21, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: LILLY CORPORATE CENTER CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 1, Application US/08804227C Patent No. 5876991
                                                                               ANTI-SENSE: NO
PORGINAL SOURCE:
ORGANISM: S.pristinaespiralis
US-09-231-818-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: X-82
TELECOMMUNICATION INFORMATION:
TELEPHONE: 317-276-2459
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 43280 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
ATTORNEY/AGENT INPORMATION:
NAME: Plant, Thomas, G.
REGISTRATION NUMBER: 35,784
                  double
 nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3238 CGAGGGCGGG 3228
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                                linear
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                               TOPOLOGY: lin-
MOLECULE TYPE: HYPOTHETICAL: N
TYPE: nucleic STRANDEDNESS:
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US-08-804-227C-1
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9
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WVENTION: AUTONOMOUSLY REPLICATING SEQUENCES,
WVENTION: GAPDH GENE AND PROMOTER DERIVED FROM
WVENTION: HANSENULA POLYMORPHA, EXPRESSION
WYENTION: VECTORS CONTAINING SAME AND METHOD FOR
NVENTION: THE SELECTION OF TRANSFORMANTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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STREET: Keukdong Villa Ka-101, Kwangjang-dong,
STREET: Kwangjin-gu
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Patent No. 5935789
MOLECULE TYPE: DNA (genomic)
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CHOI, Eui-Sung
KIM, Chul-Ho
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APPLICANT: KANG, Hyun-Ah
APPLICANT: KIM, Hwa-Young
                                                                                                                                                                                                                                                                                                         CDS
14351..19945
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816..14234
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
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OTHER INFORMATION: autonomously replicating sequnce of OTHER INFORMATION: Hansenula polymorpha DL-1(ATCC 26012) US-08-903-800A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 8.1%; Score 47; DB 2; Length 1227; Best Local Similarity 59.4%; Pred. No. 0.029; Matches 98; Conservative 0; Mismatches 65; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: KANG, Hyun-Ah
STREET: Kyungseong Keunmaul Apt. 125-1501, Kalma-dong,
STREET: Seo-gu
CITY: Daejeon
                                                                                                                                                                           ZIP: 305-335
ADDRESSEE: KIM, Chul-Ho
STREET: Shindonga Apt. 2-1101, Yongjeon-dong, Dong-gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: Republic of Korea
ZIP: 120-190
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: DISKette, 3.5inch, 1.44MB storage
COMPUTER: IBM PC/AT
OPERATING SYSTEM: MS-DOS
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/903,800A
FILING APPLICATION: 435
PRIOR APPLICATION A35
PRIOR APPLICATION NUMBER: KR 97-3173
FILING DATE: 31-JAN-1997
ATTOREY/AGENT INFORMATION:
                                                                                                                                                                                                                                           COUNTRY: Republic of Korea ZIP: 300-200 ADDRESSEE: SOHN, Jung-Hoon STREET: Nurl Apt. 103-506, Wolpyung-dong, Seo-gu CITY: Daejeon CITY: Daejeon COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Daejeon
CITY: Daejeon
STATE: Daejeon
COUNTRY: Republic of Korea
ZIP: 302-171
ADDRESSEE: KIM, Hwa-Young
STREET: #3-462, Bukahyun-3-dong, Seodaemun-gu
                                          ADDRESSEE: CHOI, Eui-Sung
STREET: Dasol Apt. 102-507, #395-3, Kung-dong,
STREET: Yuseong-gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE:
COUNTRY: Republic of Korea ZIP: 143-210 ADDRESSEE: CHOI, Eui-Sung
                                                                                                                                                IX: Républic of Korea
305-335
                                                                                                                                                                                                                                                                                                                                                                                       STATE: Daejeon
COUNTRY: Republic of Korea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: genomic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 1227 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: nucleic acid
STRANDEDNESS: single
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                                                                                                          CITY: Daejeon
STATE: Daejeon
COUNTRY: Republi
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CITY: Seoul
STATE: Seoul
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                120 ggccggcggcggggaggccgggcctgcaggcccccggtacgaca 164
                       g
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Search completed: September 28, 2002, 07:54:54 Job time: 11179 sec

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Run on:

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Minimum DB Maximum DB

Database

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enriched, double-stranded cDNA was digested with Not I and
enriched, double-stranded cDNA was digested with Not I and
cloned into the Not I and Eco RV sites of the pcMVSPORT 6
vector. Library was normalized. Library was constructed
by Life Technologies. Contact: Feng Liang Life
Technologies, a division of Invitrogen 9800 Medical Center
Drive Rockville, Maryland 20850, USA Fax: (1) 301 610
8371 Email: fliangelifetech.com URL:
http://fullength.invitrogen.com"
88 a 244 c 132 g 139 t 15 others
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B146037 603201993
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                                                                                        AA104365 mp01906 r
B1338246 361944 MA
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BF797743 602257690
BM313240 ig81d05.y
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 BI827322 603077989
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.
1 (bases 1 to 888)
1 (bases 1 to 888)
1 (bases 2 to 888)
1 (bases 2 to 888)
Full-length cDNA libraries and normalization
Unpublished (2001)
Contact: Genoscope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqrefégenoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
1. .888
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ORGANISM
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JOURNAL
COMMENT
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AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
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KEYWORDS
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AL530804
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Copyright (c) 1993 - 2000 Compugen Ltd.
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                                                                                      - nucleic search, using sw model
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Score

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Gaps

2;

g ò ò Dp ò g δ οy

```
/organism="Mus musculus"
/strain="FVBN"
/db_xref="taxon:1090"
/db_xref="taxon:1090"
/clone="inAdE:5043992"
/clone="ib="NOI_CGAP_Kid14"
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/lab_host="crgan: Kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/note="Crgan: Kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.75 kb. Constructed by Life
Technologies. Note: this is a NOI_CGAP Library. |"
17 a 222 c 316 g 132 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BG295496 1131 bp mRNA linear EST 21-FEB-2001
602392826F1 NIH_MGC_94 Mus musculus cDNA clone IMAGE:4504638 5',
                                                                                                                                                                                                                                                                                                                                                                                       gotatogoaatgigitiggaggocototggaggattataagaacggagggootatggaggo 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   149 ggccccggtacgacaagatccggactccggactacgagtacgaggcggtggcggtggag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             273 AGCCCCCTGTACGCTGGATCCGGAGTCCGGCCCGGAATACGAAGCGCTGCCGGCTGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    tgtaccccatcgactgcgtcaagacccggatgcagagtctacagcctgacccagctgccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cctgctacgaaaagttaaaaaagacattgagtgatgtaatccaccctgggggcaatagcc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           573 CCTGCTACGAAAAGTTAAAAAAGACATTGAGTGACGTAATCCACCCAGGGGGCAATAGCC
                                                                                                                                                                                                                                                                   817;
                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                   DB 10;
                                                                                                                                                                                                                                                                                               49;
                                                                                                                                                                                                                                                                Score 450.6; DB 1
Pred. No. 8.2e-73;
0; Mismatches 49
60
   row: 1 column:
                              Location/Qualifiers
 Plate: LLAM11120 row: 1 cc
High quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mRNA sequence.
BG295496
BG295496.1 GI:13057189
                                                                                                                                                                                                                                                                   77.4%;
90.8%;
                                                                                                                                                                                                                                                                                                  Conservative
                                           1. .817
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nes 502; Conserv
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Mutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
I (bases 1 to 817)

NIH-MGC http://mgc.nci.nh.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Lonpublished (1999)

Lontact: Robert Strausberg, Ph.D.
Emal: cgapbs-remail.ih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
conact: Robert Strausberg, Ph.D.
Emal: cgapbs-remail.ih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   817 bp mRNA linear EST 26-JUN-2001 602888838F1 NCI_CGAP_Kid14 Mus musculus cDNA clone IMAGE:5043992 5', mRNA sequence.
BI103329 GI:14554222 BIST.
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                                                                                                                                                                                                                                                                                    239
                                                                                                                                                                                                                                                                                                                                                                                                        gattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaacagg 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATTATAAGAACGGAGGCCTATGGAGGCCCATGAGGGGGCTGAACGTCACAGCAACAGG 538
                                                                                                                                                                cggagccccgggggagtcggcgctgctggacgggtggctgcagcgggggcgtgggccggggg 120
                                                                                                                      Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240 GCCGGCSGCGGGGAGGCCGGGGCCTGCAGG-CCCCGGTACGACAAGATCCGGACTCCGGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540 aacattacttcatgatgcagccatgaaccctgcggaag 577
                                        91.5%; Score 532.6; DB 9
98.1%; Pred. No. 9.3e-88;
                                                                        3; Mismatches
                                           Query Match
Best Local Similarity 98.1
Watches 567; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           house mouse.
Mus musculus
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512

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305 gtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggaggatta 364
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="MARC 1BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 121 row: O column: 24
Seq primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="pooled"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BACKWARD: GITITCCCAGICACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and -minmatch 12 options.
                                                                                                                                                                          BI541703.1 GI:15382815
                                                                                                                                                                                                                                                                        Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                               Contact: Smith TPL
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                   578 gc 579
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Matches 434;
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                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                       AUTHORS
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                                                                                                               BI541703
                                                                                                                                                                                            KEYWORDS
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                                          NIH MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)

Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
cDNA Library Preparation: Life Technologies, Inc.
clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LiAMN0377 row: c column: 07
High quality sequence stop: 753.
Library Location/Qualifiers
ce
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 1131)
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/tissue_type="retina"
/tab_most="DH10B (phage-resistant)"
/tab_most="DH10B (phage-resistant)"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally; oligo-dT primed.
Average insert size 3.3 kb. Library enriched for full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               159 acgacaagatccggactccggcccggactacgaggc-gctgccggctggagccactgtca
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ز
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75.4%; Score 438.8; DB 1
91.7%; Pred. No. 1.2e-70;
live 0; Mismatches 42
                                                                                                                                                                                                                                                                                                   /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:10090"
/clone="IMAGE:4504638"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity 91.7
Matches 497; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            261
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                                                            TITLE
JOURNAL
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                                REFERENCE
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Datas, Dolling, Dos.

I (bases Ito 573)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, B., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
         EST 30-AUG-2001
                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from lymph node, ovary, fat, hypothalamus, and pituitary."

166 c 176 g 110 t
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455541 MARC 1BOV Bos taurus cDNA 5', mRNA sequence.
BI541703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
TTE1: 402 762 4366
Fax: 402 762 4390
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Mus musculus
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AUTHORS
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JOURNAL
COMMENT
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Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.
E 1 (bases 1 to 697)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Contact: Robert Strausberg, Ph.D.
Emall: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CONA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:
http://image.llnl.gov
Plate: LiAMINGY row: i column: 17
                                                                                                                                                                                                                                                                                                                    BI854643 697 bp mRNA linear EST 10-OCT-2001 603381569F1 NCI_CGAP_Mam6 Mus musculus CDNA clone IMAGE:5387608 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-"Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: Not1: Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Jeffrey Green, M.D., NIH" 192 c 277 g 108 t
                                                                                                  424
                                                                      241 TAAGAACGGAGGGCCTGTGGAGGCCCATGCGAGGCCTGAACGTCACAGCAACAGGCGCAG 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122 ATGGAGTTGGAGGGCGGAGTGCAGCGGCGTGCGGGGGGGACCAGCTGCTGGTGCCCGG 181
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Pred. No. 2.3e-65;
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/csx="female, virgin"
/tissue_type="infiltrating
/dev_stage="5 months"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Mismatches
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/organism="Mus musculus"
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Location/Qualifiers
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/clone="IMAGE:5387608"
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88.9%;
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BI854643
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BI739710 967 bp mRNA linear EST 20-SEP-2001 603361983F1 NIH_MGC_94 Mus musculus cDNA clone IMAGE:5369084 5',
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Sciurognathi; Muridae; Murinae; Mus
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
1 (bases 1 to 967)
NHH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: The Cepkor Laboratory
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
Plate: LLAMI1939 row: e column: 21
High quality sequence stop: 677.
cgg--agccccgggggagtcg-gcgctgctggacgggtggctgcagcgggggggtggccgg
                       ggggccggcggcggggggccggggcctgcaggccccggtacgacaagatccggactcc
                                                                                                                              178 ggcccggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggc
                                                                                                                                                                                                                             302 GGCCCGGAATACGAAGCGCTGCCGGCTGGAGCCACTGTCACCACCACATGGTGGCGGGC
                                                                                                                                                                                                                                                                                                       238 gccgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccgg
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/clone="IMAGE:5369084"
/clone_lib="NIH_MGC_94"
/tissue_type="retina"
/lab_host="DH10B (phage-resistant)"
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    .967
    /organism="Mus musculus"

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BI739710
BI739710.1 GI:15716723
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BG964218
BG964218.1 GI:14351855
                                                                                                                                        4,
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: SalI; Cloned unidirectionally; oligo-dT primed. Average insert size 3.3 kb. Library enriched for full-length clones and constructed by Life Technologies. Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 645)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg; Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
                                                                                                                                                                                     170
                                                                                                                                                                                                              cggagccccggggagtcggcgctgctggacgggtggctgc---agcgggggggggcgg 117
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                                                                                                                                                                                                                         9999cc99cg9cggggaggccggggcctgcaggccccggtac-gacaagatccggactc
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                                                                                                                                        ;
                                                                                                              Length 967;
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                                                                                                             DB 10;
                                                                                                                                       48;
                                                                                                             Score 398.2; DB 1
Pred. No. 2.9e-63;
0; Mismatches 48
                                                                                                              68.4%;
89.8%;
                                                                                                             Query Match 68.4
Best Local Similarity 89.8
Matches 473; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              house mouse.
                                                             154
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                                                             COUNT
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TITLE
JOURNAL
COMMENT
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Fahrenkrug,S.C., Freking,B.A., Rohrer,G.A., Smith,T.P.L., Casas,B.,
Stone,R.T., Heaton,M.P., Grosse,W.M., Bennett,G.A., Laegreid,W.W.
and Keele,J.W.
                                                                                                                                                                                         /clone="IMAGE:4983815"
/clone=lib="NCI_CGAP_CGAP"
/clone_lib="NCI_CGAP_CGAP"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.6 kb. Constructed by Life
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184 ACAGCCTGACCCAGCCGCCCGCTATCGGAACGTGTTGGAGGCTCTCTGGAGAATCATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gatectggageactgegtgatgtacceategaetgegtcaagaeceggatgeagagtet
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                           Length 645;
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Bukaryota, Metazoa, Chordata, Craniata, Vertebrata,
Sukaryota, Metazoa, Chordata, Craniata, Suidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121949 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence.
BE012485
BE012485.1 GI:8273406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
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found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
plate: LLAM1098B row: p column: 24
High quality sequence start: 2
High quality sequence stop: 632.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                         66.5%; Score 387; DB 10;
91.1%; Pred. No. 3.2e-61;
tive 0; Mismatches 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                     /organism="Mus musculus"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="FVB/N"
/db_xref="taxon:10090"
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60.9%;
94.6%;
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Matches 388; Conservative
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BI185580.1 GI:14659989
                                                   USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
Fax: 402 762 4360
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the "minscore 18
PCR PRimers
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 tissue normalized cDNA libraries for
                                                                                                                                                                                                                                                                                                                                     /note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from day 11, 13, 15, 20, and 30 embruce "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  162 acaagatccggactccggcccggactacgagcgctgccggctggagccactgtcaccac 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 GCAGGATCCGGACTCCGGCCCAGACTACGAGCGCTGCCGGCTGGAGCCACTGTCACCAC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gcacatggtggcaggcgccgtggcagggatcctggagcactgcgtgatgtaccccatcga 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         342 gttggaggccctctggaggattataagaacggaggcctatggaggcccatgaggggct 401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                102 gcggggcgtgggccggggggccggcggcgggggggggccgggcctgcaggcccccggtacg 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122 GCACATGGTGGCGGGGGGCGCGTGGAAGCAATCCTGGAGCACTGGGTGATGTACCCCATCGA 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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Pred. No. 1.3e-57;
0; Mismatches 18;
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                                                                                                                                                                                                                                                                                  /db_xref="taxon:9823"
/clone_lib="MARC 1PIG"
                                                                                                                                                                                FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTTCCCAGTCACGACG
Plate: 45 row: 0 column: 20
Seq primer: ATTTAGGGTGACACTATAG.
                                                                                                                                                                                                                                                                      /organism="Sus scrofa"
                                                                                                                                                                                                                                                                                                              /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                   141 g
                                                                                                                                                                                                                                                                                                                                                                         and 30 embryos.
           EST discovery in swine Unpublished (2000)
Design and use of two
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95.58;
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Best Local Similarity 95.5
Matches 378; Conservative
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.

1 (bases 1 to 574)

S Caetano, A.R., Johnson, R.K. and Pomp, D.
Generation and sequence characterization of a normalized cDNA
Library from swine ovarian follicles
Unpublished (2001)
Contact: Pomp, D
Department of Animal Science
University of Nebraska, Lincoln
Lincoln, NE 6853-0908, USA
Tel: 402 472 6416
Fax: 402 472 6362
Email: dpompeunl.edu
Oligo-dT track not found, Not I site shown in beginning of sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9823"
/clone="UNL-P-FN-cy-f-02-0-UNL"
/clone="UNL-P-FN-cy-f-02-0-UNL"
/clone="UNL-P-FN"
/dev_stage="AbDUT"
/lab_host="DH10B (Life Technologies)"
/lab_host="Vector: pT73D-pec (Pharmacia) with a modified
/note="Vector: pT73D-pec (Pharmacia) with a modified
polylinker; Site_i: Not I: Site_2: Eco RI; The UNL-P-FN
library is a normalized library representing porcine
ovarian follicles, ranging between 2.0 to 10.0 mm in
diameter, collected during 7 days of the follicular phase
of the pig estrous cycle. This library was derived from
the library UNL-P-F2. The tag is a string of 5-6
nucleotides present between the Not I site and the
oligo-dT track. The library was constructed as described
by Bonaldo, Lennon and Soares, Genome Research 6: 791-806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Sus scrofa"
/strain="University of Nebraska, Lincoln Swine Selection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       169 ccggactccggcccggactacgaggcgctgccgg-ctggagccactgtcaccacgcacat 227
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Pred. No. 2.6e-55;
...matches 20; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oligo-dT track. The library wa by Bonaldo, Lennon and Soares, 1996.
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171 c 165 g
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BE913718 598 bp mRNA linear EST 29-SEP-2000 601669072F1 NCI_CGAP_Mam1 Mus musculus cDNA clone IMAGE:3969256 5',
                                                                                                                                                                                                                                                                                                                Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9146 row: o column: 17
High quality sequence stop: 593.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"
                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. I (bases 1 to 598)
NIH-WGC http://mgc.nci.nlh.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195 gctgccggctggagccactgtcaccacgcacatggtggcaggcgccgtggcagggatcct 254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tgacccagctgcccgctatcgcaatgtgttggaggccctctggaggattataagaacgga 374
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="NCI_CGAP_Mam1"
/tissue_type="tumor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_nost="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 345; DB 10;
Pred. No. 1.5e-53;
0; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1. .598
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:10090"
/clone="IMAGE:3969256"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /strain="FVB/N"
                                                                                                                                              BE913718.1 GI:10411618
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93.58;
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Matches 360; Conservative
                                                                                                                                                                                                                                                                                                       Unpublished (1999)
                                                                                                           mRNA sequence.
                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                 house mouse.
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Best Local
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ORIGIN
                                                                                       DEFINITION
                                        11
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TITLE
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                                                                                                                                              VERSION
KEYWORDS
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                                                        BE913718
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                                                                                                                                                                                                                                                                                            "I (Jacob J. C. Song, H., Huang, Q., Huang, C., Gu, Y., Yang, Y., Gao, G., Xiao, H., Xu, X., Li, N., Qian, B., Liu, F., Qu, J., Gao, X., Cheng, Z., Xu, Z., Zeng, L., Xu, S., Gu, W., Tu, Y., Jia, J., Fu, G., Ren, S., Zhong, M., Lu, G., Hu, R., Chen, J., Chen, Z. and Han, Z.
Homo sapiens cDNA ADB clones

L. Unpublished (2000)

Contact: Zeguang Han Genome Center at Shanghai

Sin Guo Shouling Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai

201203, P. R. China

Tel: 86-21-50801919(ex. 45)

Fax: 86-21-50801922

Email: hanz@chgc.sh.cn

This clone is available at CHGC in Shanghai.
                                                                                                                          EST 09-OCT-2000
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                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 681)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Vector: pBluescript sk(-); Site_1: EcoRI; Site_2:
                                                                                                                    AV704087 ADB Homo sapiens cDNA clone ADBAFE05 5', mRNA sequence. AV704087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116 ggggggcggcggcgggggggggggcctgcaggcccccggtacgacaagatccggact 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236 gcgccgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagaccc 295
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Score 346.4; DB 9;
Pred. No. 8.1e-54;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone_lib="ADB"
/tissue_type="Adrenal gland"
/dev_stage="Adult"
/lab_host="SOLR"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="ADBAFE05"
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Matches 347; Conservative
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Best Local 9
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Gaps

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Length Indels 454

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Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=MR3&t2=MR3-FN0209-
3001001-004-h10&t3=2001-01-30&t4=1)
Seq primer: puc 18 forward
High quality sequence stop: 480.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 480)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bala,G.S., Simpson,D.H., Brunstein,A., deoliveire,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BI045863 480 bp mRNA linear EST 14-JUN-2001
MR3-FN0209-300101-004-h10 FN0209 Homo sapiens CDNA, mRNA sequence.
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Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \operatorname{Simpson}, A \ldotp J \ldotp Shotgun sequencing of the human transcriptome with ORF expressed Shotgun
                                                                                                                                                                                                                                                                                            455 acgaaaagttaaaaaagacattgagtgatgtaatccaccctgggggcaatagccatattg 514
                                                                                                                                                                                                                                        1 TCACCACGCACATGGTGGCGGCGCCCTGGCAGGGATCCTGGAGCATTGCGTGATGTACC 60
                                                                                                                                                                                         215 tcaccacgcacatggtggcaggcgccgtggcagggatcctggagcactgcgtgatgtacc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence tags
Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
20202663
                                                            Score 323.4; DB lu;
Pred. No. 1.3e-49;
....+rhes 26;
                                                                                                                                 0; Mismatches
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                                                                             55.6%;
92.9%;
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Fax: +55-11-2707001
                                                                             Query Match 55.6
Best Local Similarity 92.9
Matches 339; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 560)

Melton, D., Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scaerce, M., Pape, D., Wylie, T., Gradwohl, G., Clifton, S., Hiller, L., Marra, M., Pape, D., Wylie, T., Marrin, J., Bistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Glabons, M., McCann, R., Cole, R., Tsagareishvill, R., Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium

L. Unpublished (2000)

Other ESTs: ic92e02.x1

Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium

Harvard University, Howard Hughes Medical Institute

Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                             EST 01-OCT-2001
                                                                                                                                                                                                                                        BI794616 560 bp mRNA linear EST 01-OCT-200: ic92e02.yl Melton Normalized Mixed Mouse Pancreas 1 N1-MMS1 Mus musculus cDNA 5' similar to TR:Q23125 Q23125 W02B12.9 PROTEIN. [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Juliana Brown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /sex="Both for embryonic & newborn, male for adult and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            adult islet"
/dev_stage="Embryonic day 10.5, E12.5, E16.5, newborn,
adult, mixed"
301 AGGGGGCAATAGCCATATTGCCAATGGTGCAGCCGGATGTGTGGGCGACATTACTTCATGA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/db_xref="taxon:10090"
//db_xref="taxon:10090"
//db_xref="taxon:10090"
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/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (brown@fas.harvard.edu)
Seq primer: -40RP from Gibco
High quality sequence stop: 430.
Location/Qualifiers
                                                 /lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                ;, mKNA sequence.
BI794616
BI794616.1 GI:15822341
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Fax: 617-495-8557
                                                                                                                                                                                                                                                                                                                        mRNA sequence.
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AUTHORS
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Single pass sequencing. Bases called and trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 20 and -minmatch 12 options.
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                                                                                                                                                                                                                                                                                                   /note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from 1ymph node, ovary, fat, hypothalamus, and pituitary."

96 c 107 g 61 t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 546)
Cogburn,L.A. and Monsonego-Ornan,E.
ESTs from Normalized Chicken Breast Muscle, Leg Muscle, and
Epiphyseal Growth Plate cDNA library, USDA/IFAFS Animal Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cgaaaaagttaaaaaagacattgagtgatgtaatccaccctgggggcaatagccatattgc 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ggggctgaacgtcacagcaacaggcgcagggcctgcccacgccctttattttgcctgcta
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 302.2; DB 9;
Pred. No. 9.4e-46;
0; Mismatches 13;
                                                                                                                                                                                                            /db_xref="taxon:9913"
/clone_lib="MARC 1BOV"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                             BACKWARD: GTTTTCCCAGTCACGACG
Plate: 8 row: F column: 16
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                 /organism="Bos taurus
                                                                                                                                                            Location/Qualifiers
                                                                               FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    114 CAATGGTGCGGCTGGTGTGTGG 336
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96.0%;
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Matches 310;
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AUTHORS
TITLE
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Smith,T.P.L., Grosse,W.M., Freking,B.A., Roberts,A.J., Stone,R.T.,
Casas,E., Wray,J.E., White,J., Cho,J., Fahrenkrug,S.C., Bennett
G.C., Heaton,M.P., Laegreid,W.W., Rohrer,G.A., Chitko-McKown,C.G.,
Pertea,G., Holt,I., Karamycheva,S., Liang,F., Quackenbush,J. and
Keele,J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 25-APR-2001
            /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="FN0209"
/dev_stage="Adult"
/dev_stage="Adult"
/note="Organ: prostate_normal; Vector: pucl8; Site_l: Sma 5: Site_2: Smal; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence evaluation of four pooled-tissue normalized bovine cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         346 gaggccctctggaggattataagaacggagggcctatggaggcccatgagggggctgaac 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182 GTCACAGCAACAGGGCGCAGGGCCTGCCCACGCGCTTTATTTTGCCTGCTACGAAAAGTTA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aaaaagacattgagtgatgtaatccacct-gggggcaatagccatattgccaatggtgc 524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              286 gicaagacccggaigcagagictacagcctgacccagcigcccgciatcgcaaigigitg 345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   406 gicacagcaacaggcgcagggcctgcccacgccctttattttgcctgctacgaaaagtta 465
                                                                                                                                                                                                                                                                                                                                                                                               226 atggtggcaggcgccgtggcagggatcctggagcactgcgtgatgtaccccatcgactgc 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242 AAAAAGACATTGAGTGATGTAATCCACCCTGGGGGGCAATAGCCATATTGCCAATGGTGC 301
                                                                                                                                                                                                                                                                                                                                                                                                                        2 AGGTGGACACGCGATGTGGCAGGGATCTGGACGCACTGCGTGATGTACCCCATCGACGACGC 61
                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 480;
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                                                                                                                                                                                                                performed under low stringency conditions." 126\ c 146\ g 92\ t
                                                                                                                                                                                                                                                                                                 миздочви 336 bp mRNA linear
19106 MARC 1BOV Bos taurus cDNA 5', mRNA sequence.
AW326482
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USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
TTE1: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                55.0%;
96.0%;
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455

EST 07-FEB-2002

Euteleostomi;

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/dev_crepto="Breast,leg:Embryo(d19):post-hatch(ld,1,3,5,7,9,11 weeks):growth plate(ld,7d,14d post-hatch)"
//ll weeks):growth plate(ld,7d,14d post-hatch)"
//lab_host="E. coli EMDH10B."
//note="Vector: pcMvSPORT6; Library made from equivalent pools of total RNA isolated from each tissue (embryonic mascle 33.3%; juvenile muscle 33.3%; and epiphyseal growth plate 33.3% of the final RNA pool). Single pass sequencing from 5'-end"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                  /db_xref="taxon:9031"
/clone="pgmZn.pk008.12"
/clone_lib="Normalized Chicken Breast Muscle, Leg Muscle, and Epiphyseal Growth Plate cDNA library (pgmZn)"
/sex="Male and Female"
/tissue_type="Breast muscle, leg muscle and epiphyseal
growth plate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tgctacgaaaagttaaaaaagacattgagtgatgtaatccaccctgggggcaatagccat 510
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Pred. No. 4.6e-45;
0; Mismatches 109; Indels
                                           Townsend Hall, Newark, DE 19717, USA
Tel: 302-831-1335
Fax: 302-831-2822
Email: cogburneddel.edu, www.chickest.udel.edu.
Location/Qualifiers
                                                                                                                                          /organism="Gallus gallus"
/strain="Commercial broiler and
Strains 90 & 21"
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                                                                                                                                                                                                                                                                                                                                                                                                                                      197
                Contact: Larry A. Cogburn
University of Delaware
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      51.3%;
77.0%;
Unpublished (2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 77.0
Matches 375; Conservative
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Search completed: September 28, 2002, 06:22:39
Job time: 9180 sec

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Homo sapi

154.1

Title: Perfect score:

Sequence:

OM nucleic

on:

Run

Scoring table:

Searched:

Minimum DB Maximum DB

Database

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AF327403 Homo sapi
A7303078 Homo sapi
AX061229 Sequence
AX061229 Sequence
AX071440 Sequence
AC096351 Rattus no
AF288621 Rattus no
AF288621 Rattus no
AF28466 Homo sapi
AF361699 Mus muscu
AF361699 Hus muscu
AF361699 Hus muscu
AF361694 Homo sapi
AC099368 Rattus no
AC015013 Homo sapi
AX06259 Rattus no
AC05516 Corosophil
AF217402 Drosophil
AF21863381 Homo sapi
AC10531 Homo sapi
AC105513 Mus muscu
AC02213 Mus muscu
AC02213 Mus muscu
AC02213 Mus muscu
AC10551 Rattus no
AC03210 Homo sapi
AC10555 Rattus no
AC012570 Homo sapi
AC10595 Rattus no
AC012570 Homo sapi
AC10595 Rattus no
AC012570 Homo sapi
AC10595 Rattus no
AC079411 Homo sapi
AC10595 Rattus no
AC079411 Homo sapi
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AC022552 Homo sapi
AC098461 Rattus no
AC097177 Rattus no
AC107039 Pan trogl
AC102552 Mus muscu
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( pases I to 1448)

Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R., Larsson,C. and Suomalainen,A.

Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing
                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEBS Lett. 494 (1-2), 79-84 (2001) 21195335
                         HSA303078
                                                                                  AF223466
AF361699
                                                                                                                                                                                                      CNSO6FGL
AC102327
AC023381
AC078884
AC108558
AC095142
AC05592
AC105592
AC012130
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AC012180
AC01280
AC074111
AC0566
AC105855
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BC015013
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AC108878
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AC051642
AC022597
AX306258
CEW02B12
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AP003518
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AF327402.1 GI:13926046
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                                                       ; Search time 5287.54 Seconds
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2742.691 Million cell updates/sec
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                                                                                                           3595312
      GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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Listing first 45 summaries

    nucleic search, using sw model

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DY HPGGNSHIANGAAGCVATLLHDAAMNPAEVYKORMOMYRNSPYHRVTDCVRAWWON
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Li,F., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R. Larsson,C. and Suomalainen,A. Direct Submission Submission Submitted (08-DEC-2000) Human Molecular Genetics, National Public Health Institute, Mennerhalmintle 166, Helsinki 00300, Finland Location/Qualifiers
                                                                                                              /note="similar to mitochondrial RNA splicing protein 3/4;
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Pred. No. 2.6e-88;
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AFYRSYTTQLTMNVPFQAIHFMTYEFLQEHFNPQRRYNPSSHVLSGACAGAVAAAATTP
LDVCKTLLNTQESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTA
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Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
FEBS Lett. 494:79-84(2001).
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
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llarity 100.0%; Pred. No. 2.6e-88;
Conservative 0; Mismatches 0;
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Eutheria; Primates; Catarrhini; Hominidae; Homo
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1. .1889
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1889)
Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B.,
Schweyen,R., Larsson,C. and Suomalainen,A.
Characterization of a novel human putative mitochondrial
transporter homologous to the yeast mitochondrial RNA splicing
proteins 3 and 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Li,F., Nikali,K., Gregan,J., Leibiger,I.,
Larsson,C. and Suomalainen,A.
Direct Submission
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/db_xref="taxon:9606"
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/codon_start=1
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/map="10q24"
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protein 3/4 (HMRS3/4

Bandman, O.,

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Catarrhini; Hominidae; Homo.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 123160)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62 CTCCGGCCCGGACTACGAGGCGCTGCCGGCTGGAGCCACTGTCACCACGCACATGGTGGC 121
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., Azimzai,Y., Lu,D.A., Au-Young,J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          422 TGTGGCAACATTACTTCATGATGCAGCCATGAACCCTGCGGAAG
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RP11-85A1
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/db_xref="taxon:9606"
376 c 351 q 26
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Primates;
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from clone
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    Location/Qualifiers
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Burford,N., Baughn,M.R.,
Patterson,C.
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                 GI:12406365
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Mammalia, Eutheria, P
1 (bases 1 to 1322)
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Les 458; Conservative
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                                                                                                                                                                                                                                                                            /function="putative mitochondrial solute carrier"
/protein_id="CAKC27899.1"
/protein_id="MANEAVVRQMOMYNSPYHRVTDCVRAVWQNEGAGAFYRSYTTQL
TMNVPFQAHHEMTVEFLQBHENDGRRYNBSSHVLSGACAGAVAAATTPLDVCKTLLNT
QESLALNSHITGHITGMASAFRTVXQVGGVTAYFRCVQARVIYQ1PSTALAWSVYEFFR
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                       Li F., Nikali K., Gregan J., Leibiger I., Leibiger B., Schweyen R.,
Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";

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                                                                                                                                                                                                                                                              /product="mitochondrial RNA splicing
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Sequence 76 from Patent WO0078953.
                                                                                                                                                                                                               /organism="Homo sapiens"
1032. .1565
                                                                                                                                                                                  1. .1889
/db_xref="taxon:9606"
                                                                                                                                                      Location/Qualifiers
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/gene="HMRS3/4"
                                                                                                                                                                                                                                                                                                                                                          YLITKRQEEWRAGK"
                                                                                                    homologous to the yeast milk
FEBS Lett. 494:79-84(2001).
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                                                        requests: clonerequest@sanger.ac.uk
On Sep 26, 2001 this sequence version replaced gi:14280413.
During sequence assembly data is compared from overlapping clones.
During sequence assembly data is compared from overlapping clones.
Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were correct by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em: FBBL; Sw.; SWISSPROT: Tr:, TREMBL; WP.; MORWIPEP, Information on the WORWIPEP HITTLY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://www.sanger.ac.uk/HGP/Chind can be round at http://www.sanger.ac.uk/HGP/Chind can be round at http://www.sanger.ac.uk/HGP/Chind can be round at http://www.chori.org/bacpac/home.htm http://www.chori.org/bacpac/home.htm http://www.chori.org/bacpac/home.htm vECTOR: place3.6
IMPORTANT: This sequence is not the entire insert of clone replications only once, except for a short overlap. Sections only once, except for a short overlap. The true left end of clone RPI1-85A1 is at 1 in this sequence. The true left end of clone RPI1-129J12 is at 51589 in this sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 10, constructed by the Sanger Centre Chromosome 10 Mapping Group. Further information can be found at
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                     Submitted (25-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
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/note="Single Clone region. Sequence from reads from a short insert library derived from a single puC clone. Restriction digest data confirm the assembly."
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/chromosome="10"
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Rattus norvegicus chromosome Rfl clone CH230-24M6, WORKING DRAFT
                                                                                                                                                                    PAT 25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                              Kassam, A., Reinhard, C., Randazzo, F., Kennedy, G.C., Pot, D., Lamson, G., Drmanac, R., Crkenjakov, R., Drmanac, S., Dickson, M., Labat, T., Leshkowitiz, D., Kita, D., Garcia, V. and Strache-Crain, B. Human genes and gene expression products
Patent: WO 0102568-A 1912 11-JAN-2001;
CHIRON CORPORATION (US); HYSEQ, INC. (US)
                                                                                                                                                                                                                                                                                                                Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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Williams, L.T., Escobedo, J., Innis, M.A., Garcia, P.D., Klinger
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Length 401;
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100.0%; Pred. No. 7.6e-37;
rive 0; Mismatches 0;
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                                                                                                                                                                                        Sequence 1912 from Patent WO0102568.
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/db_xref="taxon:9606"
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HTG; HTGS_PHASE1; HTGS_DRAFT.
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AXO71440.1 GI:12581791
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RS Muzny, D.M. Addams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C., Alabrooks S. L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J., Babrooks, S. L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.F., Carter, M. Carazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Z., Choddhry, I., Dederich, D.A., Delaney, K.R., Delagdo, O., Denn, A.L., Ding, Y., Dulh, H.H., Douthwaite, K.J., Draper, H., Dougan-Rocha, S., Durbin, K.J., Barnhart, C., Edgar, D., Edwards, C. C., Elbaj, C., Escotto, M. P., Balls, T., Ferraguco, D., Elagar, D., Edwards, C. C., Elbaj, C., Escotto, M., Ealls, T., Ferraguco, D., Elagar, D., Edwards, C., Elbaj, C., Escotto, M., Carlin, H.H., Maylak, P., Harnin, C., Harris, C., Harris, K., Hart, M., Havlak, P., Hames, A., Harnindez, J., Harnindez, J., Hadris, R., Harris, C., Harris, K., Hart, M., Havlak, P., Hawes, A., Harnindez, J., Howard, S., Huber, J., Hulyk, S., Hume, J., Jackson, E., Jacobson, B., Jackson, E., Jackson, E., Jackson, E., Jackson, E., Jackson, E., Jackson, E., Li, J., Li, Z., Linkarge, C., Lieu, J., Luly, M., Louiseqed, H., Lozado, R.J., Lui, R., Lucier, R., Lucier, R., Luna, R., Mattinez, B., Massey, E., Mawhiney, E., Martin, R., Massey, E., Succett, G., Sherer, M., Niquyen, N., Nickerson, E., Pauch, T., Ruiz, S., Moser, M., Niquyen, N., Niquyen, N., Niquyen, N., Niquyen, N., Niquyen, N., Niquyen, R., Paters, M., Paters, S., Sodery, G., Scherer, S., Soctt, G., Shen, H., Sutton, B., Peerry, J., Peters, L., Peters, L., Peters, L., Peters, L., Peters, M., Sisson, I., Sodergen, E., Soderge, M., Stonk, M., Peters, J., Stonk, M., Tanesy, J., Tangy, C., Scherer, S., Soctt, G., Shen, H., Sutton, R., Walles, M., Walles, M.
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NOTE: This is a 'working draft' sequence. It currently consists of 33 contigs. The true order of the pieces is not known and their order in this sequence record is
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Consensus quality: 205303 bases at least Q30
Consensus quality: 209366 bases at least Q30
Estimated insert size: 209880; sum-of-contigs estimation
Quality coverage: 0x in Q20 bases; agarose-fp estimation
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Contact: hgsc-help@bcm.tmc.edu
------ Project Information
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arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                    contig of 32851 bp in length gap of unknown length contig of 16033 bp in length gap of unknown length contig of 14731 bp in length contig of 12090 bp in length contig of 12090 bp in length contig of 12736 bp in length gap of unknown length contig of 10862 bp in length gap of unknown le
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Martinez, E., Massey, E., Mawhiney, E., McLeod, M.P., Meador, M., Meil, G., Miner, Z., Mitchell, T., Mohabbat, K., Morgan, M., Morris, S., Moser, M., Neal, D., Newtson, J., Newtson, M., Nguyen, A., Nguyen, N., Nguyen, N., Nickerson, E., Nwokenkwo, S.,
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                                                                                                                                                                                                                                                                                            Length 221062;
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                                                                                                                             3487 others
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/db_xref="taxon:10116"
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HTG; HTGS_PHASE1; HTGS_DRAFT.
                                           /chromosome="Rf1"
/clone="CH230-24M6"
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ORGANISM

AUTHORS REFERENCE

AC096351/c

LOCUS

ACCESSION VERSION KEYWORDS SOURCE

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Peery, J., Perez, L., Petcrs, L., Pickens, R., Primus, E., Pu, L. L., Quiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Rais, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shooshtari, N., Sisson, I., Sodergren, S., Sorate, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tamerisa, R., Tang, H., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, R., Thomas, S., Usmani, K., Vasquez, L., Vara, V., Villalon, D., Vinson, R., Mall, R., Ward, M., C., Warten, R., Washington, C., Watlington, S., Warten, R., Waezyk, R., Wooden, S., Weinstock, G. and Gibbs, R., Weinstock, G. and Gibbs, R.
                                                                                                                                                                                                                                                                                                                         Worley, K.C.
Direct Submission
Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
on Dec 20, 2001 this sequence version replaced gi:15627972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence. It currently consists of 33 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 3.9x in Q20 bases; sum-of-contigs estimation
Oguh,M., Okwuonu,G., Oragunye,N., Oviedo,R., Pace,A., Payton,B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Consensus quality: 200164 bases at least Q40
Consensus quality: 205303 bases at least Q30
Consensus quality: 209366 bases at least Q20
Estimated insert size: 209880; sum-of-contigs estimation
Quality coverage: 0x in Q20 bases; agarose-fp estimation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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MADEVVKGRLQMYNSQHQSASCIRTWWRTEGLGAPYRSTYOLTMNPFGSTHFIT
YEFLOEOVNPRDYRPGSHISGGLAGALAAATTPLDVCKTLLNTQBNMALSLANVS
GRLSGMANAFRTVYQLNGLAGYFKGIQARVIYQMPSTAISWSVYEFFKYILTKRQLEN
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VSTHWTAGAMAGILEHSIMYPVDSVKTRMQSLNPDPKARYTSIYGALKRIMHTEGFWR
                                                                                                                             1 (bases 1 to 4112)
Li,Q.-Z., Ruan,Q.-G., Eckenrode,S., Shi,J.-D., Cruz,P., Wang,C.-Y. and She,J.-X.
                                                                                                                   Craniata, Vertebrata, Euteleostomi;
Sciurognathi, Muridae, Murinae, Mus.
                                                                                                                                                                                                                                                             Submitted (20-JUL-2000) Pathology, University of Florida, 1600 Archer Road, Rm. D6-15, Gainesville, FL 32610, USA Location/Qualifiers
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/product="nericondrial solute carrier-like protein"
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                         Mus musculus mitochondrial solute carrier-like protein mRNA,
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                                                                                                                                                                   A new gene which is highly expressed in NOD mice spleen
Unpublished
                                                                                                                                                                                                           2 (bases 1 to 4112)
Li\0,-z., Shi\J.-D., Cruz,P., Echenrode,S., Ruan,Q.-G.
Wang,C.-X.
Direct Submission
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/organism="Mus musculus"
/db_xref="taxon:10090"
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Mammalia; Eutheria;
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/db_xref="taxon:10116"
/chromosome="Rf1"
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VSTHWTAGAMAGILEHSVMYPVDSVKTRMQSLSPDPKAQYTSIYGALKKIMRTEGFWR
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YEFLQEVVNORLQMYROSHIISGGLAGALAAATTPLDVCKTLLNTQBNVALSLANIS
GRLSGMANAFRTYVQLNGLPATSKASRRVSSTRCPPPFLGLSMSSSSTFSPSASWKI
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1429)
                                                                                                                                                                                                                                                                                                                                                                               Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z.
Direct Submission
Submitted (12-JAN-2000) Chinese National Human Genome Center at
Shanghai, 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, Pudong,
Shanghai Location/Qualifiers
1. 1429
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240 cgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggat 299
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 GCGCACGCCATGTATTTTGCCTGCTATGAAAACATGAAAAGGACTTTAAAATGACGTTTTC
                           -ccggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgc
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                                                                                                                                                                         AF 223466 HT015 protein (HT015) mRNA, complete cds. AF223466
                                                                                                                                                                                                                                                                                                                         Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z. A novel gene expressed in human hypothalamus Unpublished
2 (bases 1 to 1429)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo saplens"
/db_xref="taxon:9606"
/tissue_type="hypothalamus"
1. .1429
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /product="HT015 protein"
/protein_id="AAF64141.1"
/db_xref="G1:7578783"
                                                                                                catgatgcagccatgaaccctgcggaag 577
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45. .1088
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linear ROD 07-NOV-2001 protein mRNA, complete cds;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A novel mouse mitochondrial carrier protein gene is up-regulated from young to adult NOD mice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (15-MAR-2001) Department of Pathology, Immunology and Laboratory Sciences, University of Florida, 1600 SW Archer Road, Room D6-15, Gainesville, Fb 32610, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GATGGCCGGGATCCTGGAGCACTCGGTCATGTACCCGGTGGACTCGGTGAAGACACGAAT
                                                                                                                                                                                   gattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaacagg
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
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116. .664
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 177.8; DB 10
Pred. No. 7.3e-21;
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/strain="C57BL/6J"
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/chromosome="14"
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AY032628
AY032628.1 GI:13774108
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Li (bases I to 3415)
Li (0.-Z., Eckenrode, S., Ruan, Q.-G., Wang, C.-Y., Shi, J.-D., McIndoe, R.A. and She, J.-X.
McIndoe, R.A. and She, J.-X.
McNolecular cloning of a novel mictochondria solute carrier protein (MSCP) gene from mouse and human and its down-regulation in mouse spleen during the maturation of the immune system
                                                                                                                                                               369
                                                                                                                                                                                                                                                           429
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                                                                      gaggccggggcctgcaggcccccggtacgacaagatccggactccggccc---ggactac 189
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                                                                                                                                                                                                                            gagteggegetgetggaegggtggetgeagegggggegtgggeegggggggeggeggg 132
                                              GCGGGGCCGCGGATGGAGCTCCGCCGTGGCGGGGAACCAGGCTGCGGGCCCGGAGG 163
  Gaps
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SW Archer B
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Li.O.-Z., Eckenrode,S., Ruan,Q.-G., Wang,C.-Y., Shi,J.-D.
McIndoe,R.A. and She,J.-X.
Direct Submission
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 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (15-APR-2001) Department of Pathology,
Laboratory Sciences, University of Florida, 1600
Room D6-15, Gainesville, Florida 32610, USA
 162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene="MSCP"
/note="alternatively spliced"
 Mismatches
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                                                                                                                                                                                                                                                                                                                                                                              556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                     Socation/Qualifiers
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288;
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/translation="medicagoryarrandobsrdogogordatosedy rulptsas vsthwiagamagilehsvwypvdsvktrmoslspdpkaqytsiygalkkimrtegfwr plrgvnvmimgagpahamyfroyenwkrtlndvfhhqonshlangilkafvws" 851 c 846 g 919 t
                                                                                                                                                                                                                                                                                     1;
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IMAGE:3910567, mRNA, complete cds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (01-007-2001) National Institutes of Health, Mammalian
Gene Collection (MGC), Cancer Genomics Office, National Cancer
Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cgcagggcctgcccacgccctttatttgcctgctacgaaaagttaaaaaagacattgag 479
                                                                                                                                                                                                                                                                                                                                 gccggcggcggggggggcctgcaggccccggtacgacaagatccggactccggc 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGCGCGGAGGATGGATGGGACAGCCGAGATGGCGGCGGCGGCGAAGGACGCCACCGGGTC 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gcagagictacagcctgacccagctgcccgctatcgcaatgigtiggaggccctctggag 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   383 TGCAGGGCCAGCCCATGCCATGTATTTTGCCTGCTATGAAAACATGAAAAGGACTTTAAA 442
                                                                                                                                                                                                                                                                                                                                                                       -coggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cytygcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggat
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DNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Genome Sequence Centre,
BC Cancer Agency, Vancouver, BC, Canada
       protein"
                                                                                                                                                                                                                                       Length 3415;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; E
Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                     Indels
/product="mitochondria solute carrier
/protein_id="AAK38154.1"
/db_xref="GI:13774109"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIH-MGC Project URL: http://mgc.nci.nih.gov
                                                                                                                                                                                                                                     Score 174.2; DB 9;
Pred. No. 3.1e-20;
); Mismatches 173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens, clone MGC:8764 :
BC015013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
                                                                                                                                                                                                                                                                                   0;
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                                                                                                                                                                                                                                     25.1%;
62.4%;
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                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Strausberg, R.
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Matches 289; Conserv
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Ratus,

Ratus,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Consensus quality: 127058 bases at least Q40 Consensus quality: 138264 bases at least Q30 Consensus quality: 146548 bases at least Q20 Estimated insert size: 120308; sum-of-contigs estimation Quality coverage: Ox in Q20 bases; agarose-fp estimation Quality coverage: 1.9x in Q20 bases; sum-of-contigs estimation
                                                                    Eukaryota; Métazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * NOTE: Estimated insert size may differ from sequence length
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Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
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                                          Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Worley, K.C.
Direct Submission
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                                          ORGANISM
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JOURNAL
                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
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Rattus norvegicus clone CH230-84G11, *** SEQUENCING IN PROGRESS
***, 71 unordered pieces.
                                                                                                                                                                                                                                                                                                                     Clone distribution: MGC clone distribution information can be found
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
info@bcgsc.bc.ca
Steven Jones, Jennifer Asano, Ian Bosdet, Yaron Butterfield,
Susanna Chan, Readman Chiu, Chris Fjell, Erin Garland, Ran Guin,
Letticia Hsiao, Martin Kzzywinski, Reta Kutsche, Oliver Lee, Soo
Sen Lee, Victor Ling, Carrie Mathewson, Candice McLeavy, Steven
Ness, Pawan Pandoh, Anna-Lilsa Prabhu, Parvaneh Saeedi, Jacqueline
Schein, Duane Smailus, Michael Smith, Lorraine Spence, Jeff Stott,
Michael Thorne, Miranada Tsai, Natasja van den Bosch, Jill Vardy,
George Yang, Scott Zuyderduyn, Marco Marra.
                                                                                                                                                                                                                                                                                                                                                  through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Series: IRAK Plate: 15 Row: h Column: 21
This clone was selected for full length sequencing because it
passed the following selection criteria: matched mRNA gi: 7706149.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgccgt 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243 ggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatgca 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 187 GGCCGGGATCCTGGAGCACTCGGTCATGTACCCGGTGGACTCGGTGAAGACACGAATGCA 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         247 GAGTTTGAGTCCCAGATCCCAAAGCCCAGTACACAAGTATCTACGGAGCCCTCAAGAAAT 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       363 tataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaacaggcgc 422
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/clone_lib="NHLMGC_71"
/lab_host="PH10B"
/note="Vector: pCMV-SPORT6"
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/clone="MGC:8764 IMAGE:3910567"
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69.1%; Pred. No. 8.5e-20;
iive 0; Mismatches 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
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/db_xref="GI:15929110"
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Statistics

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Search completed: September 28, 2002, 07:55:42 Job time: 14663 sec
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'see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
           NOTE: This is a working draft' sequence. It currently consists of 71 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
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Copyright (c) 1993 - 2000
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		Description	a saffancoan asmut	d firstdacous immin	Human ORFX ORF398	Human transport pr	Human polynucleoti	Human secreted pro	Human polynucleoti	Novel human polynu	Human immune/haema	Human immune/haema
		ID			AAC74843	AAF27733	AA160661	AAS03906	AA158875	AAF66156	AAK69779	AAK73320
		DB	21		21	22	22	22	22	22	22	22
		Length	1336		1418	1322	1294	2502	1316	401	27960	27960
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(HUMA-) HUMAN GENOME SCI INC

polyn mitoc bone immun full-	Human CDNA 5'-end Human CDNA clone r Human CNFX ORF2730 Human polynucleoti Human CDNA 5'-end Human CDNA 5'-end	50 €	Human colon cancer Human polynucleoti Primer used in the Primer used in the Human ovarian tumo Human IL-1ra BAC c CDNA sequence #574 Primer used in the DNA encoding novel DNA encoding novel Primer used in the Primer used in the Primer used in the Primer used in the Mouse ischaemic co
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## ALIGNMENTS

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Human; uncoupling protein; immunosuppressive; antiarthritic; antirheumatic; antiproliferative; cardiant; vasotropic; cerebroprotective; neuroprotective, antibacterial; opthalmological; gastrointestinal; nephrotropic; gynaecological; vulnerary; thrombolytic; gene therapy; cancer; wound; infectious disease; thrombosis; arthritis; infertility; ss.
                       BP.
                                                                                             Human uncoupling protein cDNA #6.
                       AAC90457 standard; cDNA; 1336
                                                                                                                                                                                                                                                                                                99US-0128701.
99US-0142821.
99US-0149448.
99US-0164751.
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                                                                    12-MAR-2001 (first entry)
                                                                                                                                                                                                                            WO200061614-A2.
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08-JUL-1999;
18-AUG-1999;
12-NOV-1999;
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                                                                                                                                   encoding uncoupling proteins. The nucleotide sequences may be used for the detection of various disorders such as cancer, for chromosome identification, as chromosome markers and for numerous other diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; open reading frame; ORFX; detection; cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
                                                                                                                                                                    or research purposes. The uncoupling protein encoded by the nucleotide sequences may be used to treat disorders such as neural, immune,
                                                                                                                                                                                                                                                                                                                 107 gcgtgggccggggggccgggggggggggggggccggggcctgcaggccccggtacgacaag 166
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                                                                                                                          The present sequence is one of eighteen isolated nucleotide sequences
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             aaaagacattgagtgatgtaatccaccctggggggcaatagccatattgccaatggtgcgg 425
                                                                                                                                                                                        muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders, wounds, infectious diseases, thrombosis, arthritis, and infertility.
                                                                                                                                                                                                                                                                                               Gaps
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                                                       Uncoupling proteins and nucleic acid sequences encoding them, usefur
for detecting, preventing and treating proliferative, neurological,
immune system, cardiovascular and gastrointestinal disorders
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                                                                                                                                                                                                                                                            Score 469.4; DB 21; Lengum
Pred. No. 3.4e-91;
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  Soppet DR;
                                                                                                                                                                                                                                      Sequence 1336 BP; 333 A; 377 C; 358 G; 268 T; 0 other;
  Rosen CA,
                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                  Claim 1; Page 306-307; 343pp; English.
 Ni J, Komatsoulis G,
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                                                                                                                                                                                                                                                                        67.78;
99.88;
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                                                                                                                                                                                                                                                                     Query Match 67.7
Best Local Similarity 99.8
Matches 470; Conservative
                      2000-656322/63
                                  P-PSDB; AAB50383
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antipsoriatic; antiparkinsonian; nootropic; neuroprotective; osteopathic; anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cardiant; thrombolytic; cagulant; vasotropic; antidabetic; hypotensive; dermatological; immunosuppressive; antidiabetic; hypotensive; dermatological; immunosuppressive; antilnflammatory; antibacterial; antiviral; antifungal; antirheumatic; antilnflammatory; antibacterial; antiviral; antifungal; antirheumatic; antithyroid; and antiansemic. The sequences can be used for determining pathological conditions associated with an ORRY-associated disorder. The nucleic acids can be used to express ORRX proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus,
                                                                                                                                                                                                  hypertension;
                                                                                                                                                                                   antianaemic; gene therapy; cancer; proliferative disorder; hypertension, neurodegenerative disorder; osteoathrilits; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria, autofimnume disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    hypertension, hypothyroidism, cholesterol ester storage, misterior, hypertension, hypothyroidism, cholesterol ester storage, misterior, bacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181 ccggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgcc 240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel nucleic acids and peptides derived from open reading frame X,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
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100.0%; Pred. No. 9.3e-89;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thrombosis; contraceptive; ss
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02-APR-1999; 99US-0127636.
05-APR-1999; 99US-0127728.
30-MAR-2000; 2000US-0540763.
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Matches 458; Conservative
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disorders such as cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention provides the protein and coding sequences for 43 novel human transport proteins (designated TPPTs). These can be used in the diagnosis and treatment of transport, metabolic, neurological, reproductive, cardiovascular and immune disorders, and cell proliferative
                                                                                                                                                                                                                                                                                                              oort protein; TPPT; transport disorder; metabolic disorder; disorder; cardiovascular disorder; reproductive disorder;
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240
                                                                                       attataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaacaggc 420
                                                                                                                                                      cagagtetacagectgacceagetgecegetategeaatgtgttggaggeeetetggagg 360
                                                                                               gcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgagt 480
                                                                                                                                       gcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgagt 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Burford
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Isolated polypeptide with a human transport protein sequence is usefor the diagnosis, prevention and treatment of disorders associated with the immune, reproductive and cardiovascular systems
                                                                ၀ဲပဲ
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Patterson
                                                                                                                                                                                                                                                                                             Human transport protein TPPT-33 coding sequence.
                                                                                                                                                                                               Tang YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hillman JL, Tang YT
Lu DAM, Au-Young J,
                                                                                                                                                                                      acattacttcatgatgcagccatgaaccctgcggaagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 5; Page 160; 165pp; English.
                                                                                                                                                                                                                                               BP
                                                                                                                                                                                                                                             AAF27733 standard; cDNA; 1322
                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0148177.
99US-0149357.
99US-0162287.
                                                                                                                                                                                                                                                                                                                      neurological disorder; cardi
immune disorder; cancer; ss.
                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US16668
                                                                                                                                                                                                                                                                                                                                                                                                             99US-0139923
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INCY-) INCYTE GENOMICS INC
                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Yue H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Azimzai Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2001-041424/05.
                                                                                                                                                                                                                                                                                                               Human; transport
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P-PSDB; AAB60113
                                                                                                                                                                                                                                                                                                                                                              WO200078953-A2
                                                                                                                                                                                                                                                                                                                                                                                             16-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                     10-AUG-1999;
18-AUG-1999;
28-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                              28-MAR-2001
                                                                                                                                                                                                                                                                                                                                                                                                             17-JUN-1999;
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Baughn MR,
                                                                                                                                                                                                                                                                                                                                                                              28-DEC-2000
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                                                                                                                               ccgggggggcggcggggggggggggccgcggggccccgggtacgacaagatccgga 173
                                                                                                                                                                                                       ccggatgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccct 353
                                                                                                                                                                                                                                                                                                                                                                                ctggaggattataagaacggaggcctatggaggcccatgaggggggtgaacgtcacagc 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                        aacaggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagac 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   attgagtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtg 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                     aggogocgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagac 181
                                                                                                                                                                    cggggggccggcggcggggggggggggcctgcaggccccggtacgacaagatccgga 61
                                                                                                                                                                                                                                                                                  aggegecgtggcagggatcetggagcactgcgtgatgtaceceatcgaetgcgtcaagae
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0
                                                        22; Length 1322;
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T; 0 other;
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                                                      Score 454.4; DB 22;
Pred. No. 5.4e-88;
0; Mismatches 6;
267
 9
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 C; 351
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AA160661/c
ID AA160661 standard; cDNA; 1294
BP; 328 A; 376
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2000US-0620312.
2000US-0653450.
2000US-0662191.
                                                    55.6%;
Similarity 98.7%;
S; Conservative
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2000US-0552317.
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Sequence 1322
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09-JUL-2000;
19-JUL-2000;
03-AUG-2000;
14-SEP-2000;
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                                                      Query Match
Best Local Simil
Matches 458; C
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protein; autoimmune disorder; hyperproliferative disorder;

(first entry)

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Forty one nucleic acid molecules encoding human secreted proteins, useful the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases
                                                                                                                                                                                                                                         cardiovascular disorder; cerebrovascular disorder; angiogenesis; nervous system disorder; bacterial infection; viral infection; ss; fugal infection; coular disorder; wound healing; tissue regeneration; epithelial cell proliferation; skin ageing; chemotaxis; 1gG Pc region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Komatsoulis G, Ruben SM, Rosen CA;
                                                         AAS03906 standard; cDNA; 2502 BP.
                                                                                                                                                                                Human secreted protein gene #25.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2001-281684/29.
P-PSDB; AAU01950, AAU01989.
                                                                                                                                                                                                                         Human secreted
                                                                                                                                                                                                                                                                                                                                                                                 WO200123598-A1
                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
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                                                                                                                                         29-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                      05-APR-2001
                                                                                                  AAS03906;
                                         AAS03906
                                                                                                The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynuclectides are useful in gene therapy. A composition containing a polypeptide or polynuclectide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ombolytic activity, cancer diagnosis and therapy, drug screening, for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The sequence data for this patent did not form part of the printed
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1294 CGGGCCTGCAGGCCCCCGGTACGACAAGATCCGGACTCCGGCCCGGACTACGAGGCGCT 1235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1234 GCCGGCTGGAGCCACTGTCACCACGCACATGGTGGCAGGCGCCGTGGCAGGGATCCTGGA 1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1174 GCACTGCGTGATGTACCCCATCGACTGCGTCAAGACCCGGGATGCAGAGTCTACAGCCTGA 1115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              138 cggggcctgcaggccccgggtacgacaagatccggactccggcccggactacgaggcgct 197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             198 gccggctggagccactgtcaccacgcacatggtggcaggcgccgtggcagggatcctgga 257
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                                                                                                                                                                                                                                       Novel nucleic acids and polypeptides, useful for treating disorders such as central nervous system injuries -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         258 gcactgcgtgatgtaccccatcgactgcgtcaagacccggatgcagagtctacagcctga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cctttattttgcctgctacgaaagttaaaaagacattgagtgatgtaatccaccctgg
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                                                                                                                       Zhang J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                  Ren F,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63.5%; Score 440; DB 22; Length 1294;
100.0%; Pred. No. 6.4e-85;
iive 0; Mismatches 0; Indels 0;
                                                                                                Qian XB,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1294 BP; 267 A; 335 C; 368 G; 324 T; 0 other;
                                                                                                uen R, Ma Y, C
u C, Xue AJ,
Drmanac RT;
                                                                                                                                                                                                                                                                                               Claim 1; SEQ ID NO 4650; 10078pp; English.
                                                                                                  Chen R,
                                                                                                                       Χu C,
                                                                                              Liu C, Asundi V, Che
Wang Z, Wehrman T, Xi
Zhou P, Goodrich R,
19-OCT-2000; 2000US-0693036.
29-NOV-2000; 2000US-0727344.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          440; Conservative
                                                                                                                                                                            2001-442253/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                         (HYSE-) HYSEQ INC
                                                                                                                                                                                              P-PSDB; AAM41505
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C.N.S disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   specification.
                                                                                                                    Wang J, W
Zhao QA,
                                                                                              YT,
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Sequences AAS03873-AAS03922 represent isolated nucleic acid molecules and PCR primers of the invention. acid of the invention. Secreted proteins and their related nucleic acids can be used in the diagnosis of or susceptibility to a pathological condition by determining the presence or absence of a mutation in a nucleic acid or the presence or amount of expression of a secreted protein. The sequences are used to prevent. It read to ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The antibodies to the polypeptides can also be used in alleviating symptoms associated with disorders and in diagnostic immunosasys e.g. radioimmunosasys or enzyme linked immunosorbent assays (ELISA). The disorders include autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative disorders e.g. neoplasms of the breast or liver, cardiovascular disorders e.g. carbotasts, cerebrovascular disorders e.g. carbotani isolamena, anajogenesis, nervous system disorders e.g. Alzehamer's disease, infections caused by bacteria, viruses and fungi and coular disorders e.g. corneal infections to maintening and opithal and coular disorders e.g. corneal infections to maintening and coular disorders e.g. corneal infections to an entering and coular disorders e.g. corneal infections caused by an e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            chemotaxis and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            as a food additive or preservative to alter storage capabilities
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2502 BP; 587 A; 655 C; 669 G; 589 T; 2 other;
Disclosure; Page 460-461; 518pp; English.
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les 412; Conserv
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934 GGGCAATAGCCATATTGCCAATGGTGCGGCCGGGTGTGTGGCAACATTACTTCATGATGC

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AAF66156;
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                                                                                                                                                                                                                                                          Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
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348
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                                     gtggcaggcgccgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtc 185
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                for treating disorders
                      aagacccggatgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggag
                                                          acagcaacaggcgcagggcctgcccacgccctttattttgcctgctacgaaagttaaaa
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Zhang J;
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Yang Y,
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Drmanac RT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID NO 1078; 10078pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen R,
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Pang Z, Wehrman T, Xi
Zhou P, Goodrich R,
                                                                                                                                                                                                 AAI58875 standard; cDNA; 1316
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2000US-0598042.
2000US-0620312.
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2000US-0662191.
2000US-0693036.
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Zhou P,
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                                                                                                                                                                                                                                                                                                 leukaemia; ss
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09-JUL-2000;
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03-AUG-2000;
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Wang J, V
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              immunosuppressant and cytostatic activity. The polynuclectides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral nervous system, such as peripheral nervous system diseases, such as alzeediner's, parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Draqer Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, activity, chemotactic/chemokinetic activity, chemotactic/chemokinetic activity, hamotactic/chemokinetic activity, democraticaching and thrombolytic activity, arthritis and inflammation, leukaemias and assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                C.N.S disorders.
Note: The sequence data for this patent did not form part of the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               134
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              encoded polypeptides (AAM38642-AAM42213) with nootropic
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Pred. No. 4.4e-
0; Mismatches
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Best Local Similarity 95.5%;
Matches 421; Conservative
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HYSE-) HYSEQ INC. Williams LT,

02-JUL-1999; 02-JUL-1999;

11-JAN-2001

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Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
                               Human immune/haematopoietic antigen genomic sequence SEQ ID NO:24591
                                                                                                                                                                                                                                                                                                                                                  2000US-0205515.
2000US-0209467.
2000US-0214886.
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2000US-0216647.
2000US-0216880.
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20000S-0227009.
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2000US-0229287.
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2000US-0231413.
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2000US-0230437
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2000US-0231243
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06-NOV-2001 (first entry)
                                                                                                                                         WO200157182-A2
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16-MAR-2000;
17-MAR-2000;
19-APR-2000;
19-MAY-2000;
07-JUN-2000;
28-JUN-2000;
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14-JUL-2000;
26-JUL-2000;
                                                                                                             Homo sapiens
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07-JUL-2000;
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22-AUG-2000;
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The present sequence is one of 3351 sequences in a library of human polynucleotides. The library is used to detect differentially expressed genes correlated with a cancerous state of a mammalian cell and can detect colon, prostate, breast and lung cancer. The library can be used to produce probes for detection of mRNA and to produce additional copies of the polynucleotides. The probes can be used for chromosome mapping of the polynucleotide and for detection of transcription levels. Ribozymes or antisense oligonucleotides can be generated. The polynucleotides and their gene products are used as generated. The polynucleotides and their gene products are used as generated. The polynucleotides and chood or tissues) that will detect the earliest changes along the carcinogenesis pathway and/or monitor the efficacy of therapies and antibodies against them can be used in pharmaceutical compositions to the polynucleotides, polypetides and antibodies against them can be used in pharmaceutical compositions to the polynucleotides as the cancers and be used in pharmaceutical compositions to the polynucleotides.
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    65 taagaacggaggcctatggaggcccatgaggggctgaacgtcacagcaacaggcgcag 424
    69 taagaacggagggcctatggaggcccatgaggggctgaacgtcacagcaacaggcgcag 128

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Lamson G, Drmanac R;
Leshkowitiz D;
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Kennedy GC, Pot D, La
Dickson M, Labat I,
LW, Strache-Crain B;
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                            30-JUN-2000; 2000WO-US18374
                                                           99US-0142310
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                                                                                                                                                                     Reinhard C, Randazzo F,
Crkenjakov R, Drmanac S,
Kita D, Garcia V, Jones
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Best Local Similarity Matches 273; Conserv

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Query Match

2000US-0232401 2000US-0233063

14-SEP-2000; 14-SEP-2000;

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AAK69779;

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2000US-0241221.
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26 - SEP - 2000;
27 - SEP - 2000;
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29 - SEP - 2000;
20 - CCT - 2000;
21 - NOV - 2000;
21 - N
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08-DEC-2000;
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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
activity, and can be used in gene therapy and vaccine production. (I)
cortivity, and can be used in gene therapy and vaccine production. (I)
cortivity, and can be used in gene therapy and vaccine production. (I)
cortivity and be used to treat disorders associated with decreased
expression by rectifying mutations or deletions in a patient's genome
cortivity of (I) by expressing inactive proteins or to
supplement the patients own production of (I). Additionally. (I)
corticolocides may be used to produce the secreted (I), by inserting
the nucleic acids into a host cell and culturing the cell to express the
corticin. (I) proteins and polynucleotides may be used to prevent,
clagnose and treat immune/haematopoietic related diseases, especially
concers and cancer metastases of haematopoietic antigen genomic
concers from the present invention. AAK879912 to AAK84950 and AAM82169
crepresent sequences used in the exemplification of the present invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human immune/haematopoietic antigen genomic sequence SEQ ID NO:28132.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                         Disclosure; SEQ ID NO 24591; 3071pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Indels
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Pred. No. 1.4e-40;
0; Mismatches 15;
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                                                                                                                                     Ruben SM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    33.6%;
94.2%;
              ; 2000US-0251989.
; 2000US-0251990.
; 2000US-0254097.
; 2001US-0259678.
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Matches 242; Conservative
                                                                                                                                   Barash SC,
                                                                                                                                                                   WPI; 2001-483426/52.
              08-DEC-2000;
08-DEC-2000;
11-DEC-2000;
05-JAN-2001;
                                                                                                                                   Rosen CA,
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2000US - 0237039
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2000US - 0239937
2000US - 0239937
2000US - 0241281
2000US - 0241808
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2000US - 0246477
2000US - 0246610
2000US - 024652
2000US - 024920
2000US - 024921
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2000US-0249265.
2000US-0249297.
2000US-0249299.
2000US-0249300.
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2000US-0251030.
2000US-0251988.
2000US-0256719.
2000US-0251479.
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2000US-0251989.
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21 - SEP - 2000;

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   \mathbb{R}^{2}
            Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
                                                                                                                                20000US - 0.179065.
2000US - 0.186350.
2000US - 0.186350.
2000US - 0.186350.
2000US - 0.198123.
2000US - 0.20515.
2000US - 0.20515.
2000US - 0.20515.
2000US - 0.214886.
2000US - 0.214886.
2000US - 0.214886.
2000US - 0.214518.
2000US - 0.214718.
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2000US-0234223
                                                                                                             2001WO-US01354
                                                                  WO200157182-A2
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04-FEB-2000;
02-FEB-2000;
02-MAR-2000;
11-MAR-2000;
11-MAR-2000;
19-MAY-2000;
07-JUN-2000;
07-JUL-2000;
07-JUL-2000;
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16 - AUG - 2000;
17 - AUG - 2000;
18 - AUG - 2000;
18 - AUG - 2000;
19 - AUG - 2000;
10 - SEP - 2000;
11 - SEP - 2000;
                                                                                                            17-JAN-2001;
                                             Homo sapiens
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                                                                                                                                                                                                      AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) colynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancer metastases of haematopoietic-derived cells. AAK64703 co AAK87694 represent invention. AAK84942 to AAK84950 and AAM82169 cerepresent sequences used in the exemplification of the present invention.
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                                                                                                                         Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18383 ggcccatgaggggctgaacgtcacagcaacaggcgcagggcctgcccacgccctttatt 18442
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Pred. No. 1.4e-40;
0; Mismatches 15;
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                                                                     SM;
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                                         (HUMA-) HUMAN GENOME SCI INC.
                                                                     Ruben
11-DEC-2000; 2000US-0254097. 05-JAN-2001; 2001US-0259678.
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Best Local Similarity 94.2%;
Matches 242; Conservative
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                                                                   Barash SC,
                                                                                               WPI; 2001-483426/52
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                                                                                                                                                       metastasis
                                                                     Rosen CA,
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The invention relates to polynucleotides (AAK51456-AAK53435) and the encoded polypeptides (AAM78323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polynucleotides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity, and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ma Y;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1100 ggcgcggaggatggatgggacagccgagatggcggcggcggcaaggacgccaccgggtc 1159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1040 ctgcgccccgccgagctggcggatggagctgcgcagcgggagcgtgggcagccaggcggt 1099
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu C, Drmanac RT, Asundi V, Zhou P, Xu C, Cao Y. Wang D, Wang J, Zhang J, Ren F, Chen R, Wang ZW;
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tissue growth factor; immunomodulatory; cancer; leukaemia; nervous system disorder; arthritis; inflammation; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 200.4; DB 22; Length
Pred. No. 9.1e-34;
0; Mismatches 191; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1902 BP; 434 A; 532 C; 547 G; 389 T; 0 other;
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Wejhrman T, Goodrich R;
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62.9%;
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15-SEP-2000; 2000US-0663561.
20-OCT-2000; 2000US-0693325.
30-NOV-2000; 2000US-0728422.
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27-APR-2000; 2000US-0560875.
20-JUN-2000; 2000US-0598075.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HYSE-) HYSEQ INC
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Xue AJ, Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAM79039
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                                                                                                                 Homo sapiens.
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Human; bone marrow; antiinflammatory; cytostatic; neuroprotective; antiviral; antibacterial; antifungal; anti-HIV; haemostatic; immunosuppressive; gene therapy; cytokine cell proliferation; cell differentiation modulator; immune disorder; infection; cancer; human immunodeficiency virus; HIV; autoimmune disorder; haemophilia; ss.
                                                                                                                                                         cgttttccaccaaggaaacagccacctagccaacgggatagctgggagtatggccac 416
    gagtetacagectgacceagetgecegetategeaatgtgttggaggeeetetggaggat
                                                                        gagtttgagtcccagatcccaaagcccagtacacaagtatctacggagccctcaagaaaat
                                                                                                  tataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaacaggcgc
                                                                                                                                                                                                               tgtaatccaccctggggggaatagccatattgccaatggtgcggccgggtgtgtggcaac
                                                                                                                                                                                                                                                                                        543 attacttcatgatgcagccatgaaccctgcggaag
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2000US-0552317.
2000US-0598042.
2000US-0620312.
2000US-0653450.
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2000US-0250583.
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Ren F, W
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242
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                                                                   1340 aatcatgcggaccgaaggcttctggaggcccttgcgaggcgtcaacgtcatggg
                                          gattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaacagg
                                                                                                 cgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgag
                                                                                                                                                       tgatgtaatccaccctggggggaatagccatattgccaatggtgcggccgggtgtgtgggc
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                                                                                                                                                                                                                                                                                                                                                                                                                               solute carrier protein; hMSC-o; hypothalamus;
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nes 124;
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68.6%; Pred. No. 5.6e
iive 0; Mismatches
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                                                                                                                                                                                                                                                                                                               BP.
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nes 271; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                              preparation;
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Human Human

**AAF59920** 

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1 polypeptides, useful disorders -
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Zhang
3J, Tang YT, Liu C, Asundi V, Chen
Werhman T, Xu C, Xue AJ, Yang Y, Z
                                                                                                                                                                                      and
                                                                                                                                                                                   Novel bone-marrow-expressed polynucleotides and for treating e.g. cancer and immune deficiency
                                                                                                                                                                                                                                                             Claim 1; Page 412-413; 648pp; English.
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243 ggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatgca 302

Best Loca Matches

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polypeptide encoded by it are useful in the treatment of various immune deficiencies and disorders. The deficiencies and disorders may be genetic, may be caused by a viral (e.g. HIV), bacterial or fungal infection, or may result from an autoimmune disorder, a coagulation disorder (e.g. haemophilia), inhibition of tumour cell proliferation, suppression of an inflammatory response or treatment of a nervous system disorder such as Alzheimer's disease. Detection of the presence or increased expression of the polynucleotide or the protein it encodes is useful for the diagnosis and/or prognosis of one or more types of cancer. The polynucleotide and polypeptide can be used as nutritional sources or supplements and in the screening of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1980 agcactcggtcatgtacccggtggactcggtgaagacacgaatgcagagtttgagtccag 2039
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                                                                                                                                                                                                                                                                                                                                                          DB 22; Length 2562;
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                                                                                                                                                                                                                                                                                                                                                        Score 187.4; DB 22; Length
Pred. No. 5.6e-31;
0; Mismatches 121; Indels
                                                                                                                                                                                                                                                                                          Sequence 2562 BP; 623 A; 660 C; 627 G; 652 T; 0 other;
                                                                                                                                                                                                                                                 chemical compounds as potential drugs.
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04-FEB-2000; 2000US-0180628.
24-FEB-2000; 2000US-0184664.
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Best Local Similarity 68.2
Matches 260; Conservative
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cannot acid sequences given in AMM81210 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) colpnucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic artigle genomic concerns and cancer metastases of haematopoietic antigen genomic concerns the present invention. AAK54942 to AAK8789169
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                         represent sequences used in the exemplification of the present invention
             AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   291 gaccoggatgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggc 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                255 agcaacaggcgcagggcctncccacggcctttattttgcctgtacggaaaagttaaaaaa 314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ota T, Nishikawa T, Isogai T, Hayashi K, Ishii S, Kawai Y;
Wakamatsu A, Sugiyama T, Nagai K, Kojima S, Otsuki T, Koga H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                                                               26.1%; Score 181; DB 22; Length 339; 95.1%; Pred. No. 1e-29; tive 1; Mismatches 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; full length cDNA; cDNA synthesis; oligo-capping; ss
                                                                                                                                                                                                                                                                                                                                                          Sequence 339 BP; 86 A; 84 C; 101 G; 64 T; 4 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human full-length cDNA, SEQ ID NO: 4109.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     471 gacattgagtgatgtaatccaccct 495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        315 ggcattgagtgatgtaatccaccct 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAK94897 standard; cDNA; 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-JAN-2000; 2000JP-0118774.
02-MAY-2000; 2000JP-0183765.
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Matches 195; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (HUMA-) HUMAN GENOME SCI INC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2001-483426/52.
P-PSDB; AAM85891.
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08-NOV-2000;
08-NOV-2000;
08-NOV-2000;
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08-NOV-2000;
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08-DEC-2000

Rosen CA,

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Search completed: September 28, 2002, 08:05:59 Job time: 11554 sec
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                                                                                     The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nuclectide sequences of 5'- and 3'-ends of the cDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the cDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA easily without any special methods. The present sequence is a full length enrich.
                                                                                                                                                                                                                            printed
                         Primers useful for synthesizing full length cDNA clones and their
                                                                                                                                                                                                                                                                                                                                                                                                                                                            181 -ccggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgc 239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             419
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                                                                                                                                                                                                                                                                                                                                                                                                                                     ggcgcggaggatggatggggacagccgagatggcggcggcggcaaggacgccaccgggtc 145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggag 359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gcagagtttgagtccagatcccaaagcccagtacacaagtatctacggagccctcaagaa 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  386 tgcagggccggcccatgccatgtattttgcctgctatgaaaacatgaaaaggactttaaa 445
                                                                                                                                                                                                                                                                                                                                                                                  ctgcgccccgccgagctggcggatggagctgcgcagcgggagcgtgggcagccaggcggt 85
                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                         human cDNA of the invention.

Note: The sequence data for this patent did not form part of the pr
specification, but was obtained in CD-ROM format directly from EPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaacagg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aatcatgcggaccgaaggcttctggaggcccttgcgaggcgtcaacgtcatgatcatggg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgag
                                                                                                                                                                                                                                                                                                      DB 22; Length 1890;
                                                                                                                                                                                                                                                                                                                                Η;
                                                                Claim 8; SEQ ID NO 4109; 1380pp + sequence listing; English
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                                                                                                                                                                                                                                                                                                    25.1%; Score 174.2; DB 22; Length 62.4%; Pred. No. 3.6e-28; ive 0; Mismatches 173; Indels
                                                                                                                                                                                                                                                                Sequence 1890 BP; 441 A; 534 C; 496 G; 419 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tgatgtaatccaccctggggggaatagccatattgccaatggt 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human cDNA 5'-end sequence, SEQ ID NO: 817
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                                      use in genetic manipulation
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                                                                                                                                                                                                                                                                                                                              Matches 289; Conservative
                                                                                                                                                                                                                                                                                                                   Best Local Similarity
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                                                                                                                                                                                                                                                                                                    Query Match
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The invention relates to primers for synthesising full length cDNA clones. 830 cDNA molecules encoding a human protein have been isolated and nucleotide sequences of 5'- and 3'-ends of the CDNA molecules have been determined. Primers for synthesising the full length cDNA are useful for clarifying the function of the protein encoded by the CDNA. The full length clones were obtained by construction of full length enriched cDNA libraries that were synthesised by the oligo-capping method. The primers enable the production of the full length cDNA assily without any special methods. The present sequence is the nucleotide sequence of the 5'-end of a cDNA provided in the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in CD-ROM format directly from EPO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183 ggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgccgt 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatgca 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gagictacagcctgacccagctgcccgctatcgcaatgigttggaggccctctggaggat 362
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gagtttgagtccagatcccaaagcccagtacacaagtgtctacggagccctcaagaaaat 254
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 173.6; DB 22; Length 842; Pred. No. 4.3e-28; 0; Mismatches 104; Indels 0;
Claim 2; SEQ ID NO 817; 1380pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 842 BP; 213 A; 210 C; 219 G; 195 T; 5 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            483 tgtaatccaccctgggggcaatagccatattgccaatggt 522
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 25.1
Best Local Similarity 69.4
Matches 236; Conservative
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Primers useful for synthesizing full length cDNA clones and

in genetic manipulation

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Hayashi K, Ishii S, Kawai Y; K, Kojima S, Otsuki T, Koga

Wakamatsu A, Sugiyama T, Nagai

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WPI; 2001-524255/58.

07-JUL-2000; 2000EP-0114089.

EP1130094-A2 05-SEP-2001 99JP-0194486

08-JUL-1999;

11-JAN-2000; 2000JP-0118774 02-MAY-2000; 2000JP-0183765

(HELI-) HELIX RES INST Nishikawa T,

Isogai T,

Sequence 1, Appli Sequence 1, Appli Sequence 11, Appli Sequence 11, Appli Sequence 15, Appli Sequence 17, Appli Sequence 17, Appli Sequence 7, Appli Sequence 7, Appli Sequence 7, Appli

Sequence 39, 1 Sequence 2, Al Sequence 1, Al Sequence 36, 1 Sequence 36, 1

1, Appli 3, Appli 23, Appl

Sequence 1 Sequence 3 Sequence 2

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Run

Sequence:

Minimum DB Maximum DB

Database

Result No.

Searched:

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gageecegggggagteggegetgetggaegggtggetgeagegggggegtgggeeggggggg 122
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 62.4; DB 4; Length 319;
Pred. No. 5.5e-06;
0; Mismatches 56; Indels
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US-09-165-264-12
i Sequence 12, Application US/09165264
i Patent No. 6197510
i GENERAL INFORMATION:
i APPLICANT: Vinayagamoorthy, Thuraiayah
i TITLE OF INVENTION: Multi-Loci Genomic Analysis
i FILE REFERENCE: 44747
i CURRENT APPLICATION NUMBER: US/09/165,264
i CURRENT FILING DATE: 1998-10-01
i NUMBER OF SEQ ID NOS: 14
i SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 8, Application US/09165264

Patent No. 6197510

GENERAL INFORMATION:
APPLICANT Vinayagamoorthy, Thuraiayah

TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747

CURRENT PEPLICATION NUMBER: US/09/165,264

CURRENT FILING DATE: 1998-10-01

NUMBER OF SEQ ID NOS: 14

SEQ ID NO 8: 198

LENGTH: 319
US-09-283-471A-39
US-08-658-136-1
US-08-658-136-1
US-08-83-533-36
US-09-283-471A-36
PCT-US91-06532-1
US-08-458-745-1
US-08-458-745-1
US-09-458-568A-11
US-09-458-568A-11
US-09-773-816-1
US-09-773-816-1
US-09-773-816-1
US-09-775-891B-24
US-08-903-800A-3
US-08-603-8838-1
US-08-603-8838-1
US-08-603-33
US-08-603-8838-1
US-08-406-030-3
US-08-603-8838-1
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     Similarity
     @@@@@@@@@@@@
     Query Match
Best Local Simi
Matches 96;
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                                                                                                               ; Search time 182.06 Seconds (without alignments) 934.989 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence 13, beguence 11, beguence 11, beguence 3, At Sequence 3, At Sequence 1, 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Sequence 1, Sequence 1, P Sequence 1, P Sequence 1, P Sequence 1, P Sequence 39,
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                                                                                                                                                                                                                                                                                                                                767066
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1: /cgn2_6/ptodata/2/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
                                  Compugen Ltd
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US-09-165-264-12

US-09-165-264-14

US-09-165-264-13

US-09-165-264-13

US-09-165-264-13

US-09-165-264-13

US-08-403-852D-3

US-08-10-646B-3

US-09-231-818-3

US-09-231-818-1

US-09-231-818-1

US-09-130-144-2

US-09-130-144-2
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US-09-103-840A-1
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US-08-893-333-1
US-08-054-077C-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-903-800A-4
US-08-483-533-39
                  GenCore version 4.5
Copyright (c) 1993 - 2000 Comp
                                                                                                                                                                                                                                                                                              383533 seqs, 122816752 residues
                                                                                                                 September 28, 2002, 07:54:54
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Listing first 45 summaries
                                                                                nucleic search, using sw model
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length: 2000000000
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US-09-128-155-16/c
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US-09-165-264-14
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Pred. No. 5.1e-05;
0; Mismatches 138; Indels
                                                                                                                                       Length 318;
                                                                                                                                       Query Match 8.4%; Score 58.2; DB 4; Length 3 Best Local Similarity 61.6%; Pred. No. 5.1e-05; Matches 93; Conservative 0; Mismatches 58; Indels
                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
US-09-165-264-14
US-09-165-264-14
Sequence 14, Application US/09165264
Patent No. 6197510
GENERAL INFORMATION:
APPLICANT: Vinayagamoorthy, Thuraiayah
FILE REFERENCE: 44747
CURRENT APPLICATION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44747
CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243 ggcagggatcctggagcactgcgtgatgtaccccatcga 281
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Best Local Similarity 50.5%;
Matches 141; Conservative
                                TYPE: DNA ORGANISM: Artificial Sequence
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SEQ ID NO 14
LENGTH: 320
 SEQ ID NO 12
LENGTH: 318
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                                                               FEATURE:
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128 goggggaggccggggcctgcaggccccggtacgacaagatccggactccggcccggact 187
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                                                                    TITLE OF INVENTION: NOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY TITLE OF INVENTION: NOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY TITLE OF INVENTION: AND USES THEREOF ELLE REFERENCE: 09404/05201 CURRENT APPLICATION UNMBER: US/09/128,155 CURRENT FILING DATE: 1998-08-03 EARLIER APPLICATION NUMBER: US 60/091,650 EARLIER APPLICATION NUMBER: US 60/094,646 EARLIER FILING DATE: 1998-07-08-094 EARLIER PILING DATE: 1997-08-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis;
FILE REFERENCE: 44747
CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT APPLICATION NUMBER: US/09/165,264
NUMBER OF SEQ ID NOS: 14
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO: LENGTH: 320
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8.3%; Score 57.8; DB 4;
Best Local Similarity 61.7%; Pred. No. 6.3e-05;
Matches 92; Conservative 0; Mismatches 57;
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Pred. No. 0.00018;
0; Mismatches 93;
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SOFWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 16
LENGTH: 152331
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Sequence 16, Application US/09128155 Patent No. 6117654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: (1)...(152331)
; OTHER INFORMATION: n = A,T,C or G
US-09-128-155-16
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Best Local Similarity 55.1%;
Matches 114; Conservative
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NAME/KEY: misc_feature
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                                                    GENERAL INFORMATION:
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US-09-165-264-7
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APPLICANT: Jacques, Nathalie
APPLICANT: Lacroix, Patricia
APPLICANT: Thibaut, Denis
APPLICANT: Zagorec, Monique
APPLICANT: Debussche, Laurent
APPLICANT: Decey_Lagard, Valerie
APPLICANT: Depugard, Valerie
APPLICANT: Depugard, Valerie
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
                                                                                                                                                 63 gagccccgggggagtcggcgctgctggacgggtggctgcagcgggggcgtgggccggggggc 122
                                                                                                                                                                                         Finnegan, Henderson, Farabow, Garrett & Dunner
1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATION SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/403,852D
FILING DATE: 10-MAY-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92/11441
      61.9%; Pred. No. 7.7e-05;
tive 0; Mismatches 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            03806.0054-00000
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                                                                                                                                                                                                                                                                      ; Sequence 3, Application US/08403852D
; Patent No. 5891695
; GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 20005-3315
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Meyers, Kenneth J.
REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Blanche, Francis
Crouzet, Joel
Jacques, Nathalie
                                                                                                                                                                                                                                                                                                                                                                                                                                       Blanc, Veronique
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TELEFAX: (202) 408-4400
INFORMATION FOR SED ID NO: 3: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 25-SEP-1992 ATTORNEY/AGENT INFORMATION:
                         91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 833 base pairs
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CORRESPONDENCE ADDRESS:
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    Best Local Similarity
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APPLICANT:
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; OTHER INFORMATION: Description of Artificial Sequence:Primer sequence US-09-165-264-13
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58.9%; Pred. No. 7e-05;
iive 0; Mismatches 69; Indels
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~hes 69; Indels
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Fatent No. 6197510
GENERAL INFORMATION:
APPLICART: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REFERENCE: 44447
CURRENT APPLICATION UNMBER: US/09/165,264
CURRENT APPLICATION UNMBER: US/09/165,264
SOURMER OF SEQ ID NOS: 14
SOFTWARE: Patentin Ver. 2.1
SSOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Vinayagamoorthy, Thuraiayah
TITLE OF INVENTION: Multi-Loci Genomic Analysis
FILE REPERENCE: 44747
CURRENT APPLICATION NUMBER: US/09/165,264
CURRENT FILING DATE: 1998-10-01
NUMBER OF SEQ ID NOS: 14
SEQ ID NO 13
LENGTH: 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8.3%; Score 57.4;
                                                                                                                                                              123 cggcggcgggaggccggggcctgcaggc 151
                                                                                                                                                                                                      276 gggggggggggggggggggggggggg 304
                                                                                                                                                                                                                                                                                                      Sequence 13, Application US/09165264
Patent No. 6197510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA ORGANISM: Artificial Sequence
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Matches 99; Conservative
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                                                                                                                                                                                                                                                                    RESULT 6
US-09-165-264-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
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US-09-231-818-3/c
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LOCATION:
US-08-510-646B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STATE:
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Lacroix, Patricia
Thibaut, Denis
Zagorec, Monique
Debussche, Laurent
De Crecy-Lagard, Valerie
NENTION: Polypeptides Involved In The
VENTION: Blosynthesis Of Streptogramins, Nucleotide Sequences
VENTION: Coding For These Polypeptides And Their Use
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                                                                                                                                                                                                                                                      4;
                                                                                                                                                                            Score 50.6; DB 2; Length 833;
Pred. No. 0.0034;
0; Mismatches 114; Indels
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STREET: 1300 I Street, N.W., Suite 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: PCT/FR 93/00923 FILING DATE: 25-58P-1993 PRIOR APPLICATION DATE: APPLICATION NUMBER: FR 92/11441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/403,852
FILING DATE: 10-MAY-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 3, Application US/08510646B
Patent No. 6077699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-
                                                                                                                                                                            7.3%;
53.0%;
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Crouzet, Joel
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Best Local Similarity 53.0
Matches 133; Conservative
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CORRESPONDENCE ADDRESS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ccgtggcaggg 249
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; NAME/KEY:
; LOCATION:
US-08-403-852D-3
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APPLICANT:
APPLICANT:
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APPLICANT:
APPLICANT:
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APPLICANT:
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APPLICANT: Blanc, Veronique
APPLICANT: Blanc, Veronique
APPLICANT: Blanche, Francis
APPLICANT: Crouzet, Joel
APPLICANT: Jacques, Nathalie
APPLICANT: Thibaut, Denis
APPLICANT: Zagorec, Monique
APPLICANT: De Creoy-Lagard, Valerie
APPLICANT: De Creoy-Lagard, Valerie
APPLICANT: De Creoy-Lagard, Valerie
APPLICANT: De Creoy-Lagard, Valerie
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119 gggccggcggcggggggccggggcctgcaggcccccggtacgacaagatccggactccg 178
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1300 I Street, N.W., Suite 700
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                          NAME: Meyers, Kenneth J.
REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-01000
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000
TELEPHONE: (202) 408-4400
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; Sequence 3, Application US/09231818; Patent No. 6171846; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: S.pristinaespiralis
ATTORNEY/AGENT INFORMATION:
NAME: Meyers, Kenneth J.
                                                                                                                                                                                                                                                     LENGTH: 833 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 53.03
Matches 133; Conservative
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                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-CENA
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CITY: Washington
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3298 GCTGCTTCACCGAGGCGGCGTCGGCCGCCTCGTCGAGCAGGACGAGGTCGGCGGCCGCGG 3239
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                                                                                                                                                                                                                                                            Biosynthesis Of Streptogramins, Nucleotide S
Coding For These Polypeptides And Their Use
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                                                                                                                                                                                                                        Polypeptides Involved In The Biosynthesis Of Streptogramin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/403,852D
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REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-00000
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 408-4000
TELEFAX: (202) 408-4400
INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Finnegan, Henderson, Farabow, STREET: 1300 I Street, N.W., Suite 700 CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PILLING DATE: 10-MAY-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
FILLING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION DATA:
FILLING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
FILLING DATE: 25-SEP-1992
ATTORNEY AGENT INFORMATION:
                                                                                                                                                                                                   De Crecy-Lagard, Valerie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                       Zagorec, Monique
Debussche, Laurent
                                                                                 Patricia
                                                   Nathalie
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Best Local Similarity 53.0%;
Matches 133; Conservative C
   Francis
                                                                                                                  Denis
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LENGTH: 5392 base pairs
                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS: ADDRESSE: Finnegan,
                                                                                 Lacroix, Thibaut, I
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STRANDEDNESS: doub
Blanche,
                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                            Jacques,
                                                                                                                                                                                                                        TITLE OF INVENTION:
TITLE OF INVENTION:
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ZIP: 20005-3315
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ORIGINAL SOURCE:
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APPLICANT:
APPLICANT:
APPLICANT:
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                                                                                                                                                            SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/231,818
                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/403,852
FILING DATE: 10-MAY-11995
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92/11441
FILING DATE: 25-SEP-1992
ATORNEY/AGENT INFORMATION:
NAME: MAYGEN, Kenneth J.
REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 25,146
REFERENCE/OCKET NUMBER: 25,146
R
                                                                                                                                    OPERATING SYSTEM: PC-DOS/MS-DOS
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Sequence 1, Application US/08403852D
Patent No. 5891695
GENERAL INFORMATION:
APPLICANT: Blanc, Veronique
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: S.pristinaespiralis
                                                                              E: Floppy disk
IBM PC compatible
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                                                   COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                      FILING DATE:
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US-09-231-818-3
                                                                                                            COMPUTER:
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3238 CGAGGCCGGG 3228
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SOFTWARE: PatentTr
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CITY: Washington
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APPLICANT: Lacroix, Patricia
APPLICANT: Lacroix, Patricia
APPLICANT: Lacroix, Patricia
APPLICANT: Thibaut, Denis
APPLICANT: Zagorec, Monique
APPLICANT: Debussche, Laurent
APPLICANT: Debussche, Laurent
APPLICANT: Debussche, Laurent
APPLICANT: Debussche, Laurent
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
NUMBER OF SEQUENCES: 45
CORRESPONDENCE ADDRESS:
ADDRESSED: Finnegan, Henderson, Farabow, Garrett & Dunner
STREET: 1300 I Street, N.W., Suite 700
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARES PATENTIN Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/510,646B FILING DATE: 03-40G-1995 CLASSIFICATION: 435 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/403,852 FILING DATE: 10-40X-1995 PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/FR 93/00923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Meyers, Kenneth J.
REGISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03806.0054-01000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FR 92/11441
                                                                                                                                                Sequence 1, Application US/08510646B
Patent No. 6077699
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TELEFAX: (202) 408-44000
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5392 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
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Blanche, Francis
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92
FILING DATE: 25-SEP-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                       3238 cGAGGGCGGGG 3228
239 ccgtggcaggg 249
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TOPOLOGY: linear
MOLECULE TYPE: CDNA
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20005-3315
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CORGANISM: S.P
US-08-510-646B-1
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APPLICANT:
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Gaps

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7.3%; Score 50.6; DB 3; Length 5392; 53.0%; Pred. No. 0.0049; live 0; Mismatches 114; Indels 4

Conservative

Best Local Similarity Matches 133; Conserv

Query Match

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APPLICANT: Thibaut, Denis
APPLICANT: Zagorec, Monique
APPLICANT: Zagorec, Monique
APPLICANT: Debussche, Laurent
APPLICANT: De Crecy-Lagraf, Valerie,
APPLICANT: De Crecy-Lagraf, Valerie,
TITLE OF INVENTION: Polypeptides Involved In The
TITLE OF INVENTION: Biosynthesis Of Streptogramins, Nucleotide Sequences
TITLE OF INVENTION: Coding For These Polypeptides And Their Use
                                                        3418 CGCCCAGGACCGGTCGTCGGAGCCGGTGAACCCGTGAAGCCGTCGCGGGGCTGT 3359
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                                                                                                                          63 gagcc----ccgggggagtcggcgctgctggacgggtggctgcagcggggcgtgggccggg 118
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E: Finnegan, Henderson, Farabow, Garrett & Dunner
1300 I Street, N.W., Suite 700
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APPLICATION NUMBER: US/09/231,818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03806.0054-00000
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APPLICATION NUMBER: US/08/403,852
FILING DATE: 10-MAY-1995
APPLICATION NUMBER: PCT/FR 93/00923
FILING DATE: 25-SEP-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: FR 92/11441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Meyers, Kenneth J.
RECISTRATION NUMBER: 25,146
REFERENCE/DOCKET NUMBER: 03
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Jacques, Nathalie APPLICANT: Lacroix, Patricia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Blanc, Veronique
APPLICANT: Blanche, Francis
APPLICANT: Crouzet, Joel
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TELEFAX: (202) 408-4400
INFORMATION FOR SEQ ID NO: 1:
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ATTORNEY/AGENT INFORMATION:
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LENGTH: 5392 base pair:
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36249..41774
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31232..36067
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816..14234
STRANDEDNESS: single
                    linear
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                                MOLECULE TYPE:
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FEATURE:
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                                                                                                                                LOCATION:
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NAME/KEY:
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                                                                                                                                                                                                                                                              NAME/KEY:
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US-08-804-227C-1
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                                                                                                                                                                                DB 4; Length 5392;
                                                                                                                                                                           Query Match 7.3%; Score 50.6; DB 4; Length 5 Best Local Similarity 53.0%; Pred. No. 0.0049; Matches 133; Conservative 0; Mismatches 114; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: DeHoff, Bradley S.
APPLICANT: Rublecos, Stuart A.
APPLICANT: Rosteck, Paul R., Jr.
APPLICANT: Sutton, Kimberly L.
TITLE OF INVENTION: POLYKETIDE SYNTHASE GENES
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: THOMAS G. PLANT 1501
STREET: LILLY CORPORATE CENTER
CITY: INDIANAPOLIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: ASCI(DOS) Text only
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/804,227C
FILING DATE: February 21, 1997
CLASSIFICATION: 435
ATORNEY/AGENT INFORMATION:
NAME: Plant, Thomas, G.
REGISTRATION NUMBER: 35,784
REFERENCE/DOCKET NUMBER: X-8231
TELECOMMUNICATION INFORMATION:
TELEPHONE: 317-276-2459
INFORMATION FOR SEQ. ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08804227C Patent No. 5876991
                                                                                                              ORGANISM: S.pristinaespiralis
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible OPERATING SYSTEM: MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 43280 base pairs
TYPE: nucleic acid
             double
nucleic acid
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                           TOPOLOGY: linear MOLECULE TYPE: cDNA
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                                                                          ANTI-SENSE: NO ORIGINAL SOURCE:
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16438 CGGCGGTGCCATGGCCGCGCTGCGCCCACCGCCGAGAGAGTCGCACTACTGCTGGAGCG 16497
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APPLICANT: RHEE, Sang-Ki
APPLICANT: CHOI, Eui-Sung
APPLICANT: CHOI, Eui-Sung
APPLICANT: CHOI, Eui-Sung
APPLICANT: SCHN, Jung-Hoon
APPLICANT: KANG, Hyun-Ah
APPLICANT: KANG, Hwa-Young
TITLE OF INVENTION: AUTONOMOUSLY REPLICATING SEQUENCES,
TITLE OF INVENTION: APPRICANCE CONTAINING SAME AND METHOD FON
TITLE OF INVENTION: THE SELECTION OF TRANSFORMANTS
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: RHEE, Sang-Ki
STRREET: KeukGong Villa Ka-101, Kwangjang-dong,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
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DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7.18;
50.28;
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ADDRESSEE: KANG, Hyun-Ah
STREET: Kyungseong Keunmaul Apt. 125-1501, Kalma-dong,
STREET: Seo-gu
                                                                                                                                                   ZIP: 305-335
ADDRESSEE: KIM, Chul-Ho
STREET: Shindonga Apt. 2-1101, Yongjeon-dong, Dong-gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Daejeon
STATE: Daejeon
COUNTR: Republic of Korea
ZIP: 302-171
ADDRESSEE: KIM, Hwa-Young
STREET: #3462, Bukahyun-3-dong, Seodaemun-gu
CITY: Seoul
                                                                                                                                                                                                                                                                      ZIP: 300-200
ADDRESSEE: SOHN, Jung-Hoon
STREET: Nuri Apt. 103-506, Wolpyung-dong, Seo-gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: Secul 21P: 120-190
ZIP: 120-190
COMPUTER READABLE FORM: COMPUTER READABLE FORM: MEDIUM TYPE: Diskette, 3.5inch, 1.44MB storage COMPUTER: IBM PC/AT COMPUTER: SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
                              ADDRESSEE: CHOI, Eui-Sung
STREET: Dasol Apt. 102-507, #395-3, Kung-dong,
STREET: Yuseong-gu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/903,800A FILING DATE: 31-JUL-1997 CLASSIFICATION: 435 PRIOR APPLICATION DATA: APPLICATION NUMBER: KR 97-3173 FILING DATE: 31-JAN 1997 ATTORNEY/AGENT INPORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE:
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STATE: Dasjeon
COUNTRY: Republic of Korea
ZIP: 300-200
Republic of Korea
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COUNTRY: Republic of Korea
ZIP: 302-280
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LENGTH: 1227 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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Best Local Similarity 59.4%;
Matches 98; Conservative
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MOLECULE TYPE: genomic DNA
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vector. Library was normalized. Library was constructed
by Life Technologies. Contact : Feng Liang Life
Technologies, a division of Invitrogen 9800 Medical Center
Drive Rockville, Maryland. 20850, USA Fax : (1) 301 610
8371 Email : fliang@lifetech.com URL :
http://fulllength.invitrogen.com"
88 a 244 c 322 g 139 t 15 others
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AL530804
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Li,W.B., Gruber,C., Jessee,J. and Polayes,D.
Uni,W.B., Gruber,C., Jessee,J. and Polayes,D.
Unpublished (2001)
Contact: Genoscope
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BP 191 91006 EVRY cedex - France
Email: seqrefégenoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
1. 888
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AUTHORS
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KEYWORDS
SOURCE
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602888838F1 NCI_CGAP_Kid14 Mus musculus cDNA clone IMAGE:5043992
                                                         cgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggat 299
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                                                                                                                                               cgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgag
     Length 888;
                   Indels
     .,
    Score 532.6; DB 9
Pred. No. 1.1e-93;
3; Mismatches 4
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    76.98;
98.18;
                                                                                                                                                                                                                                                                                                                                        5', mRNA sequence.
BI103329
                  Conservative
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          Best_Local Similarity
Matches 567; Conserv
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    Query Match
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RESULT

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1131 bp mRNA linear EST 21-FEB-2001 NIH_MGC_94 Mus musculus CDNA clone IMAGE:4504638 5',
                                                                                                                                                        Site_1: NotI;
Imer: Oligo dT
                                                                         /drain="FVB/N"
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/db_xref="texnon:10090"
/clone="lib="NCI_CGAP_Kid14"
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/note="organ: kidney; Vector: pCWV-SPORT6; Site_1: Not Site_2: Sall; Cloned unidirectionally. Primer: Oligo Average insert size 1.75 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library. |"
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Pred. No. 1e-77;
0; Mismatches 48;
 60
    column:
                                                1. .817
/organism="Mus musculus"
Plate: LLAMILLZV .....
High quality sequence stop: 7
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                /db_xref="txxxx".10090"
/clone="IMAGE:4504638"
/clone="IMAGE:4504638"
/clone="txxxx".infingc_94"
/tissue_type="retina"
/lab_host="DH108" (phage-resistant)"
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Site_2: SalI; Cloned unidirectionally; oligo-dT primed.
Average insert size 3.3 kb. Library enriched for full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
51 a 335 c 375 g 160 t
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 1131)
                                                                                      Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: The Cepko Laboratory
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
Plate: LLAM10377 row: c column: 07
High quality sequence stop: 753.
                                             NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       261
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Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.
                                                                                                                                                                                                                         Bovidae; Bovinae; Bos.

1 (bases I to 573)

Smith, T.P. L., Grosse, W. W., Freking, B.A., Roberts, A.J., Stone, R.T.,
Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett
G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G.,
Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
            EST 30-AUG-2001
                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                     Sequence evaluation of four pooled-tissue normalized bovine cDNA
libraries and construction of a gene index for cattle
Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pcMv SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from lymph node, ovary, lat, hypothalamus, and pituitary."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125 geggeggaggeegggeetgeaggeeceeggtaegaeaagateeggaeteeggeeegg 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         365 taagaacggaggcctatggaggcccatgaggggctgaacgtcacagcaacagcgcag 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 573;
573 bp mRNA linear
455541 MARC 1BOV Bos taurus CDNA 5', mRNA sequence.
BI541703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Smith TPL USDA, ARS, US Meat Animal Research Center DO Box 166, Clay Center, NE 68933-0166, USA TP1: 402 762 4366 Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 419.4; DB 1
Pred. No. 9.4e-72;
0; Mismatches 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Bos taurus"
/db_xref="taxon:9913"
/Clone_lib="MARC 1BOV"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Plate: 121 row: O column: 24
Seg primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FORWARD: AGGAAACAGCTATGACCAT BACKWARD: GTTTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                GI:15382815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Match 60.5%;
Local Similarity 95.4%;
les 432; Conservative
                                                                              BI541703.1
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JOURNAL
COMMENT
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BI739710
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KEYWORDS
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                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 697)
NIH-MGC http://mgc.nci.nih.gov/.
Mational Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
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                                             484
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Tissue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Colone distribution: MGC clone distribution information can by
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
i column: 17
High quality sequence stop: 696.
Location/Qualifiers
                                            7;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:10090"
/db_xref="taxon:10090"
/clone="taxon:10080"
/sex="female, virgin"
/tissue_type="infiltrating ductal carcinoma"
/dev_stage="5 months"
/lab_nost="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 409.8; DB 10; Length
Pred. No. 6.9e-70;
0; Mismatches 57; Indels
                                                                                                                                                                    tacttcatgatgcagccatgaaccctgcggaag 577
                                                                                                                                                                                   /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                     BI854643.1 GI:15995390
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88.9%;
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                                                                                                                                                                                                                                                                                                       mRNA sequence.
BI854643
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                                                                                                                                                                                                                                                                                                                                                                   house mouse.
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JOURNAL
COMMENT
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                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
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BI739710 967 bp mRNA linear EST 20-SEP-2001 603361983F1 NIH_MGC_94 Mus musculus cDNA clone IMAGE:5369084 5',
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
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/lab_host="DH10B (phage-resistant)"
/note="Organ: eye; Vector: pCMV-SPORT6; Site_1: Not1;
Site_2: Sal1; Cloned unidirectionally; oligo-dT primed.
Average insert size 3.3 kb. Library enriched for full-length clones and constructed by Life Technologies.
                                                                                                                                                                                                                                                                                                                                                                        aggattataagaacggagggcct-atggaggcccatgagggggggtgaacgtcacagcaac 416
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118 ggggccggcggcggggggccgggggcctgcaggcccccggtacgacaagatccggactcc 177
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-remail.nih.gov
Tissue Procurement: The Cepko Laboratory
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.lln.gov
                                                                                                                                                                                    298 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                           242 GGGGCCGGCGGCGGGGGGGGGCCTATCAGCCCCCTGTACGGCTGGATCCGGAGTCC
                                                                                             ggcccggactacgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggc
                                                                                                                   534 tgtggcaacattacttcatgatgcagccatgaacc 568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Mus musculus"
/db_xref="taxon:10090"
/clone="IMAGE:5369084"
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Contact: Robert Strausberg, Ph.D.
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Location/Qualifiers
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Mus musculus
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BE012485.1 GI:8273406
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Best Local Similarity 91.3%;
Matches 410; Conservative
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KEYWORDS
SOURCE
ORGANISM
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ORIGIN
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BE012485
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             FEATURES
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G02828996F1 NCI_CGAP_Co24 Mus musculus cDNA clone IMAGE:4983815 5', mRNA sequence.

BG964218

G1:14351855
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IIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
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                                                                                Gaps
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Email: cgapbs-remail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can I
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lnl.gov
Plate: LLAM10988 row: p column: 24
High quality sequence start: 2
                                                                                                                                                                                                                                            cggagccccggggagtcggcgctgctgacgggtggctgc---agcggggcgtgggccgg
                                                                                                                                                                                                9999ccggcggcggaggccggggcctgcaggccccggtac-gacaagatccggactc
                                                                                                                                                                                                           cgccgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccg
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                                                        Length 967;
                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gagtgatgtaatccaccctgggggc-aatagccatattgccaatggt 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10;
this is a NIH_MGC Library."
18 c 348 g 187 t
                                                                               48;
                                                      Score 398.2; DB 1
Pred. No. 1.3e-67;
0; Mismatches 48
                                                        57.5%;
89.8%;
         278 c
                                                                            Matches 473; Conservative
 Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   house mouse.
          Ø
         154
                                                        Query Match
Best Local 3
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ORGANISM
         BASE COUNT
ORIGIN
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                                                                                                                                                                                              118
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TITLE
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COMMENT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
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EST 09-JUL-2000
                                                                                              /db_xraf="tax".
/db_xraf="tax".
/clone="IMAGE:4983815"
/clone=lib="NCI_CGAE_CO24"
/lab_host="null0B (Tl phage-resistant)"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
/ste_2: SalI; Cloned unidirectionally. Primer: oligo dT.
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
a 189 c 193 g 116 t
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Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Laegreid, W.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                129 cggggaggccggggcctgcaggccccggtacgacaagatccggactccggcccggacta 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189 cgaggcgctgccggctggagccactgtcaccacgcacatggtggcaggcgccgtggcagg 248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   249 gatcctggagcactgcgtgatgtaccccatcgactgcgtcaagacccggatgcagagtct 308
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Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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Sus scrofa
Sus scrofa
Sus scrofa
Mammalia: Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia: Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
I (bases 1 to 397)
Fahrenkrug,S.C., Freking,B.A., Rohrer,G.A., Smith,T.P.L.,
Stone,R.T., Heaton,M.P., Grosse,W.M., Bennett,G.A., Laegre
and Keele,J.W.
                                                                                                                                                                                                                                                                                                                                                                                                   .;
0
                                                                                                                                                                                                                                                                                                                                                              Length
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121949 MARC 1PIG Sus scrofa cDNA 5', mRNA sequence
BEO12485
                                                                                                                                                                                                                                                                                                                                                                                                   39; Indels
                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                                                         Score 386.6; DB 1
Pred. No. 2.2e-65;
0; Mismatches 39
                                                           /organism="Mus musculus"
/strain="FVB/N"
ity sequence stop: 632
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               452
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Query Match
Best Local Similarity 94.6%;
Matches 388; Conservative C
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                                                                                                                                                                                         POLYA=No
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  AUTHORS
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               TITLE
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                                                                Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.

PCR PRIMERS
FORWARD: AGGAAACAGCTATGACCAT
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Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
1 (bases 1 to 574)
                                                                                                                                                                                                                                                                     /note="Vector: pCMV SPORT6; Site_1: Xba1; Site_2: Xho1; Library made from pooled tissue from day 11, 13, 15, 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282 ctgcgtcaagacccggatgcagagtctacagcctgacccagctgcccgctatcgcaatgt 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                    9c999gcgtgggccggggggccggcggcggggggccggggcctgcaggccccggtacg 161
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                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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0
                                                                                                                                                                                                                                                                                                                                                                 Length 397;
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USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
TTE1: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                 DB 9;
                                                                                                                                                                                                                                                                                                                                                                Score 367.2; DB 9
Pred. No. 1.2e-61;
0; Mismatches 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         μ
                                                                                                                                                                                                                                                                                                            61
                                                   Email: smith@email.marc.usda.gov
                                                                                                                                                                                                             /db_xref="taxon:9823"
/clone_lib="MARC lPIG"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                     /organism="Sus scrofa"
                                                                                                                                 BACKWARD: GTTTTCCCAGTCACGACG
Plate: 45 row: O column: 20
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                           141 g
                                                                                                                                                                                                                                                                                              and 30 embryos.
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95.5%;
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Best Local Similarity 95.5
Matches 378; Conservative
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Sus
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ORGANISM
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/dev_stage="AbDUT"
/lab_host="Wetor: pT73D-Pac (Pharmacia) with a modified
/lab_host="Nettor: pT73D-Pac (Pharmacia) with a modified
/lote="Wetor: pT73D-Pac (Pharmacia) with a modified
polylinker; Site_1: Not I: Site_2: Eco RI; The UNL-P-FN
library is a normalized library representing porcine
ovarian follicles, ranging between 2.0 to 10.0 mm in
diameter, collected during 7 days of the follicular phase
of the pig estrous cycle: This library was derived from
the library UNL-P-F2. The tag is a string of 5-6
nucleotides present between the Not I site and the
oligo-dT track. The library was constructed as described
by Bonaldo, Lennon and Soares, Genome Research 6: 791-806
                                                                                                                                                                                                                                                                            Email: dpomp@unl.edu oligord track not found, Not I site shown in beginning of sequence oligord track not found, Not Is likely internal to the message. Seq primer: M13 -29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /strain="University of Nebraska, Lincoln Swine Selection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ccggactccggcccggactacgaggcgctgccgg-ctggagccactgtcaccacgcacat 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ggtggcaggcgccgtggcagggatcctggagcactgcgtgatgtaccccatcgactgcgt 287
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cacagcaacaggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaa 467
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Pred. No. 3.5e-59;
0; Mismatches 20;
Caetano, A.R., Johnson, R.K. and Pomp, D. Generation and sequence characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="UNL-P-FN-cy-f-02-0-UNL"
/clone_lib="UNL-P-FN"
                                                      library from swine ovarian follicles
Unpublished (2001)
Contact: Pomp, D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        104 t
                                                                                                                              Department of Animal Science
University of Nebraska, Lincoln
Lincoln, NE 6853-0908, USA
Tel: 402 472 6416
Fax: 402 472 6362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Sus scrofa"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:9823"
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171 c 165 g
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DEFINITION ACCESSION VERSION KEYWORDS SOURCE

AV704087

ORGANISM

AUTHORS

REFERENCE

TITLE JOURNAL

COMMENT

FEATURES

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BE913718 159-SEP-2000 508 bp mRNA linear EST 29-SEP-2000 601669072F1 NCI_CGAP_Mam1 Mus musculus cDNA clone IMAGE:3969256 5',
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: Not1; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH"
                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 598)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.llnl.gov
Plate: LLAM9146 row: o column: 17
High quality sequence stop: 593.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gggcctatggaggcccatgagggggtgaacgtcacagcaacaggcgcagggcctgccca 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181 GGGCCTGTGGAGGCCCATGCGGGGCTGAACGTCACAGCAACAGGCGCGGGGCCTGCCCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GGAGCATTGCGTGATGTACCCGGATCGACTGCGTCAAGACCCGGATGCAGAGCCTACAGCC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gctgccggctggagccactgtcaccacgcacatgtggcaggcgcgtggcagggatcct
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone="IMAGE:3969256"
/clone_lip="NCI_CGAP_Mam1"
/tissue_type="tunor, biopsy sample"
/dev_stage="10 months, virgin"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19.7%; Score 344.6; DB ilarity 93.7%; Pred. No. 3e-57; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .598
/organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="FVB/N"
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tgcagccatgaacctgcggaag 577
                                                                          BE913718.1 GI:10411618
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BE913718
                                                                                                                                     Mus musculus
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Best Local Similarity
Matches 359; Conserv
                                                                                                                   house mouse
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

15. I (bases 1 to 681)

16. Feng, Y., Song, H., Huang, Q., Huang, C., Gu, Y., Yang, Y., Gao, G., Xiao, Y., Xu, X., Li, N., Qiao, B., Liu, F., Qu, J., Gao, X., Cheng, Z., Chong, M., Tu, Y., Jia, J., Fu, G., Ren, S., Zhong, M., Lu, G., Hu, R., Chen, J., Gu, W., Tu, Y., Jia, J., Fu, G., Ren, S., Zhong, M., Lu, G., Hu, R., Chen, J., Ghen, Z., and Han, Z.

16. Hu, R., Chen, J., Ghen, Z. and Han, Z.

17. Gontact: Zequang Han

18. Guotact: Zequang Han

18. Guotact: Zequang Han

18. Chinese National Human Genome Center at Shanghai

201203. P. R. China

Tel: 86-21-508019219(ex.45)

Fax: 86-21-508019219(ex.45)

Fax: 86-21-50801922

Email: hanzq@chgc.sh.cn

This clone is available at CHGC in Shanghai.
                                                    AV704087 ADB Homo sapiens cDNA clone ADBAFE05 5', mRNA sequence.
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/dev_stage="Adult"
/lab_host="SoLR"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="ADBAFE05"
/clone_lib="ADB"
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                                                                                                             AV704087.1 GI:10721407
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Query Match Best Local Matches 34

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176

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RESULT 1 BE913718

BASE COUNT

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Gaps

; 0

Indels

LOCUS DEFINITION

RESULT 12

g G

BI794616

SOURCE ORGANISM

KEYWORDS

REFERENCE AUTHORS

ACCESSION

VERSION

TITLE JOURNAL COMMENT

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BIO45863 480 bp mRNA linear EST 14-JUN-2001
MR3-FN0209-300101-004-h10 FN0209 Homo sapiens CDNA, mRNA sequence.
BIO45863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Dias Neto,E., García Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bala,G.S., Simpson,D.H., Brunstein,A., deoliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and Simpson,A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: +55-11-2704922

Fax: +55-11-2707001

Email: asimpson@ludwig.org.br

This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=MR3&t2=MR3-FN0209-3001010-004-4-h10&t3=2001-01-30&t4=1)

Seq primer: puc 18 forward High quality sequence stop: 480.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 480)
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shotgun sequencing of the human transcriptome with ORF expressed sequence tags
                                                                                                                                                                                                                                                  121 GGAACGTGTTGGAGGCTCTCTGGAGAATCATGAGGACAGAGGCCTGTGGAGGCCCATGC 180
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                                                                                                                                                                                                                     275 ccatcgactgcgtcaagacccggatgcagagtctacagcctgacccagctgcccgctatc 334
                                                                                                                                                                1 TCACCACGCACATGGTGGCGGCCCCGTGGCAGGGATCCTGGAGCATTGCGTGATGTACC 60
                                                                                                         tcaccacgcacatggtggcaggcgcgtggcagggatcctggagcactgcgtgatgtacc
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20202663
Pred. No. 4.7e-53;
                                                    0; Mismatches
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/db_xref="taxon:9606"
/clone_lib="FN0209"
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                       93.1%;
                       Best Local Similarity 93.1
Matches 338; Conservative
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/lab_host="DHIOB"
/lab_host="DHIOB"
/note="Vector: pSPORT1; Site_1: Not I; Site_2: Sal I; Five
libraries representing E10.5/12.5 pancreatic bud, E16.5
pancreas, mewborn pancreas, adult pancreas, and adult
islets of Langerhans were seperately constructed using
SuperScript Plasmid Library kit (Life Technologies). CDNA
was made by oligo-dT priming and size-selected by column
fractionation. Libraries were amplified once on solid
support and plasmid DNA from each library was prepared
and mixed in equal amounts. The mixed library DNA was
normalized by method #4 from Bonaldo, Lennon, and Soares
1996 Genome Research 6:791-806, 0.5 microgram
single-stranded mixed library plasmid DNA was mixed with
5 micrograms PCR product representing mixed library
inserts and hybridized to an Ecot of 6. Single-stranded
(unhybridized) plasmids were isolated by hydroxyapatite
chromatography and used to make this library."
                                                                                                                                                          BI794616 560 bp mRNA linear EST 01-OCT-2001 ic92e02.yl Melton Normalized Mixed Mouse Pancreas 1 N1-MMS1 Mus musculus cDNA 5' similar to TR:Q23125 Q23125 W02B12.9 PROTEIN. [1]; mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                       Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases I to 560)

Lemishka, I. Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillart, L., Marrah., Pape, D., Wylie, T., Marthn, J., Blistain, S., Allalfart, A., Theising, B., Wylie, T., Marthn, J., Blistain, A., M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Jackson, Y. and Bowers, Y.

Endocrine Pancreas Consortium
Unpublished (2000)
Other_ESTs: ic92e02.x1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: dmelton@biohp.harvard.edu
Library was constructed by Dr. Douglas Melton DNA sequencing by:
Mashington University Genome Sequencing Center For information on
obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu)
Seq primer: -40RP from Gibco
High quality sequence stop: 430.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Endocrine Pańcreas Consortium
Harvard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex="Both for embryonic & newborn, male for adult and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /dev_stage="Embryonic day 10.5, E12.5, E16.5, newborn,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="Melton Normalized Mixed Mouse Pancreas 1 v1-Mms1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
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/db_xref="taxon:10090"
                       361 TGCAGCCATGAATCCAGCGGAAG 383
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Query Match

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Bovidae; Bovoinae; Bos.

Smith, T.P.L., Grosse, M.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Keele, J.W.
                                                                                                                                                                                                              1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 20
               puc18; Site_1: SmaI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST 25-APR-2001
            Sequence evaluation of four pooled-tissue normalized bovine cDNA
                                                                                                                                                                                                                                     226 atggtggcaggcgcgtggcagggatcctggagcactgcgtgatgtaccccatcgactgc 285
                                                                                                                                                                                                                                                                                                                                                          346 gaggccctctggaggattataagaacggaggcctatggaggcccatgaggggggtgaac 405
                                                                                                                                                                                                                                                                                                                                                                           466 aaaaagacattgagtgatgtaatccaccct-gggggcaatagccatattgccaatggtgc 524
                                                                                                                                                                                                                                                                                                286 gicaagacccggaigcagagictacagccigacccagcigcccgciatcgcaaigigiig 345
                                                                                                                                                                                                                                                                                                                406 gtcacagcaacaggcgcagggcctgcccacgccctttattttgcctgctacgaaagtta 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
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                                                                                                                                                                                                                                                                 2 AGGTGGACGCGATGTGGCAGGGATCTGGACGCACTGCGTGATGTACCCCATCGACTGC 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 320.2; DB 10; Length 480;
Pred. No. 1.6e-52;
0; Mismatches 13; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
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19106 MARC 1BOV Bos taurus cDNA 5', mRNA sequence.
AW326482
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Fax: 402 762 4390
                                                                                                                   146 g
/dev_stage="Adult"
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96.0%;
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Best Local Similarity 96.0
Matches 339; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Smith TPL
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VERSION
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pgm2n.pk008.12 Normalized Chicken Breast Muscle, Leg Muscle, and Epiphyseal Growth Plate cDNA library (pgm2n) Gallus gallus cDNA clone pgm2n.pk008.12 5' similar to ref!XP_05076.1 (XM_050766) putative mitochondrial solute carrier [Homo sapiens] gblAAK49519.1|AF327402.1 (AF327402) putative mitochondrial solute carrier prochondrial solute carrier gplice variant [Homo sapiens], mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
                                                                                                                                                                                                                                                                                                   /note="Vector: pcMv SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from lymph node, ovary, fat, hypothalamus, and pituitary."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cgaaaagttaaaaaagacattgagtgatgtaatccaccctgggggcaatagccatattgc 515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             216 caccacgcacatggtggcaggcgccgtggcagggatcctggagcactgcgtgatgtaccc 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 catcgactgcgtcaagacccggatgcagagtctacagcctgacccagctgcccgctatcg 335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             caatgtgttggaggccctctggaggattataagaacggagggcctatggaggcccatgag 395
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ggggctgaacgtcacagcaacaggcgcagggcctgcccacgccctttattttgcctgcta 455
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   194 AGGCCTGAACGTCACAGCAACAGCGCAGGGCCTGCCACCACTCTATTTGCCTGCTA 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     254 TGAAAAGTTAAAAAAGACATTGAGTGATGTAATCCACCCTGGGGGCAATAGCCATATTGC 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ESTs from Normalized Chicken Breast Muscle, Leg Muscle, and Epiphyseal Growth Plate cDNa library, USDA/IFAFS Animal Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14 CACCACGCACATGGTGGCGCGCGCGCGCGGGGATCCTGGAGCACTGCGTGATCTACC 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 336;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
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Contact: Larry A. Cogburn
Contact: Larry A. Cogburn
Townsend Hall, Newark, DE 19717, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cogburn, L.A. and Monsonego-Ornan, E.
                                                                                                                                                                                                                /clone_lib="MARC 1BOV"
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Plate: 8 row: F column: 16
Seq primer: ATTTAGGTGACACTATAG.
FORWARD: AGGAAACAGCTATGACCAT
                                                                                                             Location/Qualifiers
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96.08;
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/dev_stage="Breast,leg:Embryo(d19):post-hatch(ld,1,3,5,7,9,11 weeks);growth plate(ld,7d,14d post-hatch)"

11 weeks);growth plate(ld,7d,14d post-hatch)"

12 blost="E. coll EMDH10B"

//note="Vector: pCMVSPORT6; Library made from equivalent pools of total RNA isolated from each tissue (embryonic macle 33.3%; juvenile muscle 33.3%; and epiphyseal growth plate 33.3% of the final RNA pool). Single pass sequencing from 5 -end"
                                                                                                                                                 /db_xref="taxon:9031"
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/clone="pgm2n.pk008.12"
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                                                                                                                                                                                                                                                             /tissue_type="Breast muscle, leg muscle and epiphyseal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           391 atgaggggctgaacgtcacagcaacaggcgcagggcctgcccacgccctttattttgcc 450
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91 gggtggctgcagcgggggggtgggccggggggccggcggcggggggccgggggcctgcagg 150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        151 cccccggtacgacaagatccggactccggcccggactacgaggcgctgccggctggagcc 210
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     211 actgicaccacgcacatggtggcaggcgccgtggcagggatcctggagcactgcgtgatg 270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       130 GCCGTGTCCACGACATGCTGGCGGCGCCGTGGCGGCATCATGGACACTGCGTGATG 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tatogoaatgtgttggaggcoctctggaggattataagaacggagggcotatggaggcoc 390
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 43.1%; Score 298.4; DB 10; Length Best Local Similarity 77.0%; Pred. No. 2.8e-48; Matches 375; Conservative 0; Mismatches 109; Indels
Tel: 302-831-1335
Fax: 302-831-2822
Email: cogburn@udel.edu, www.chickest.udel.edu.
                                                                                                                     and
                                                                            1. .546
/organism="Gallus gallus"
/strain="Commercial broiler
Strains 90 & 21"
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                                                        Location/Qualifiers
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Search completed: September 28, 2002, 06:22:41 Job time: 9182 sec

Scoring table:

Searched:

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Minimum

Database

Perfect score:

Sequence:

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AX012190 Sequence 028167 human STS SAX003265 Sequence 26651 Caenorhabdi AY060268 Drosophil 045998 Onchocerca AX209368 Rattus no AX198694 Sequence AX209226 Sequence AR21402 Drosophil AF21674 Homo sapi
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AF327403 Homo sapi
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AL533719 Human DNA
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AF1560 Homo sapi
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AC02597 Homo sapi
AF216674 Homo sapi
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BC015013 Homo sapi
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G22871 Homo sapi
X56445 Yeast nucle
X87371 S.cerevisia
AX33750 Sequence
AX011696 Sequence
Z28277 S.cerevisia
X5644 Yeast nucle
AC019585 Drosophil
AC009388 Drosophil
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                                                                                                                       KO56782 Homo sapi
BC023172 Mus muscu
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AX306258 Sequence
AX071440 Sequence
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Lal, P., Yang, J., Yue, H., Hillman, J.L., Tang, Y.T., Bandman, O., Burford, N., Baughn, M.R., Azimzai, Y., Lu, D.A., Au-Young, J. and Patterson, C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AE003763 Drosophil
   AX061229 SAF327402 B
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Patent: WO 0078953-A 76 28-DEC-2000;
Incyte Genomics, Inc. (US)
Location/Qualifiers
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Sequence 76 from Patent WO0078953.
AX061229 GI:12406365
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                                                                                                                     September 28, 2002, 07:55:42
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Copyright (c) 1993 - 2000
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EAGACRPPVRQDPDSGPDYEALPAGATVTTHWVAGAVAGILEHCVMYPIDCVKTRMQS
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DVIHPGGNSHIANGAAGCVATLLHDAAMNPAEVVKQRMQMYNSPYHRVTDCVRAVWQN
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AATTPLDVCKTLLNTQESLALNSHITGHITGHASAFRFVYQVGGVTAYFRGVQARVIY
OPSFJAIAMSVYEFKLITKRQEBRAGK"
408 c 235 g 283 t
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Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
1 (bases 1 to 1448)
                                                                   Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schwepter,R., Larsson,C. and Suomalainen,A. Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing
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Li,F., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schw
Larsson,C. and Suomalainen,A.
Direct Submission
Submitted (08-DEC-2000) Human Molecular Genetics, National
Health Institute.
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ilarity 100.0%; Pred. No. 7.2e-240;
Conservative 0; Mismatches 0;
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/db_xref="taxon:9606"
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Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
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accccactggacgtttgcaaaacactgctcaacacccaggagtccttggctttgaactca
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Submitted (12-DEC-2000) to the EMBL/GenBank/DDBJ databases.
Nikali K., Human Molecular Genetics, National Public Health
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
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                                                                                                                                           Length 1448;
                                                                                                                                                               Indels
                                                                                                             BP; 322 A; 408 C; 435 G; 283 T; 0 other;
                                                                                                                                           100.0%; Score 798; DB 17; 100.0%; Pred. No. 7.2e-240;
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0
                                                                                                                                                              0; Mismatches
                                                                                          IAWSVÝEFFKYLITKROEEWRAGK"
                                                                                                                                                    Best Local Similarity 100.
Matches 798; Conservative
                                                                                                             Sequence 1448
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4

SOURCE ORGANISM

REFERENCE

AUTHORS

TITLE

DEFINITION

LOCUS

RESULT AF327403

g

ACCESSION

VERSION KEYWORDS

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Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                 1470 TACCAGATCCCCTCCACAGCCATCGCATGGTCTGTGTATGAGTTCTTCAAATACCTAATC 1529
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Li F., Nikali K., Gregan J., Leibiger I., Leibiger B., Schweyen R., Larsson C., Suomalainen A.; "Characterization of a novel human putative mitochondrial transporter hemologous to the yeast mitochondrial RNA splicing proteins 3 and 4"; FEBS Lett. 494:79-84(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sapiens mRNA for mitochondrial RNA splicing protein 3/4 (HMRS3/4
                                                               463 aacccccagagacggtacaacccaagctcccacgtcctctctggagcttgcgcaggagct
                 11330 AACCCCCAGAGACGGTACAACCCCAGGTCCTCTGTCTGTGTGGAGCTTGCGCAGGAGCT
                                                                                                                                taccagatcccttccacagccatcgcatggtctgtgtatgagttcttcaaatacctaatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HMRS3/4 gene; mitochondrial RNA splicing protein 3/4
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(Rel. 67, Last updated, Version 2)
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    .1889
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26-APR-2001
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NTQESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYE
FFKYLITKRQEEWRAGK"
                                                                           AF327403 1889 bp mRNA linear PRI 02-MAY-2001 Homo sapiens putative mitochondrial solute carrier splice variant mRNA, complete cds, alternatively spliced, nuclear gene for AF327403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /protein_id="AAK49520.1"
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                                                                                                                                                                                                                                                                                                                                                                                                                            Li,F., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R. Larsson,C. and Suomalainen,A. Direct Submission
Submitted (08-DEC-2000) Human Molecular Genetics, National Public Health Institute, Mennerhelmintle 166, Helsinki 00300, Finland
Location/Qualifiers
                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 1889)

Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R., Larsson,C. and Suomalainen,A.

Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing proteins 3 and 4

FEBS Lett. 494 (1-2), 79-84 (2001)
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100.0%; Pred. No. v...
0; Mismatches
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/organism="Homo sapiens"
/db_xref="taxon:9606"
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Human DNA sequence from clone RP11-85A1 on chromosome 10, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (25-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire, CB10 1SA, UK. E-mail enquiries: humquery@sanger.ac.uk clone requests: clone-request@sanger.ac.uk
On Sep 26, 2001 this sequence version replaced gi:14280413.
During sequence assembly data is compared from overlapping clones.
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Catarrhini; Hominidae; Homo
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100.0%; Pred. No. 2.7e-152;
iive 0; Mismatches 0;
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
1 (bases 1 to 123160)
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AL353719 AC007643
AL353719.10 GI:15787725
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Best Local Similarity 100.
Matches 520; Conservative
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Direct Submission
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SOURCE
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TITLE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (25-MAY-2000) Chinese National Human Genome Center at Shanghai, 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201203, People's Republic of China Location/Qualifiers
                                                                                                                                        1050 GTCAAGCAGAGGATGCAGATGTACAACTCACCATACCACCGGGTGACAGACTGTGTACGG 1109
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 1244)
Xu,X., YangyY., Gao,G., Xiao,H., Chen,Z. and Han,Z.
Direct Submission
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6.3ë-170;
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/db_xref="taxon:9606"
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                  together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission corresponding to the overlapping clone, as we submit sequences with only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality) as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one M13 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, SWISSPROT: Tr:, TREMBL; WP:, WORNPEP: Information on the WORMPEP
                                                                                                                                                                                                                                                                                                                                                                                        http://www.sanger.ac.uk/Projects/C_elegans/wormpep This sequence was generated from part of bacterial clone contigs of human chromosome 10, constructed by the Sanger Centre Chromosome 10 Mapping Group. Further information can be found at http://www.sanger.ac.uk/HGP/Chri0
RPII-85A1 is from the library RPOI-11.1 constructed by the group of Pieter de Jong. For further details see http://www.chori.org/bacpac/home.htm
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IMPORTANT: This sequence is not the entire insert of clone RPI1-85A1 It may be shorter because we sequence overlapping sections only once, except for a short overlap.

The true left end of clone RPI1-85A1 is at 1 in this sequence. The true left end of clone RPI1-838F11 is at 123061 in this sequence. The true right end of clone RPI1-129J12 is at 51589 in this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82871
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/clone="RPCI-11.1"
complement(7066. 7118)
/note="Single clone region. Sequence from reads from a short insert library derived from a single pUC clone.
Restriction digest data confirm the assembly."
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Where differences are found these are annotated as variations
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/db_xref="taxon:9606"
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Isogal, T., Otsuki, T. and Suglyama, T.

Direct Submission
Submitted (24.0CT-2001) Takao Isogai, Helix Research Institute,
Submitted (24.0CT-2001) Takao Isogai, Helix Research Institute,
Genomics Laboratory; 1532-3 Yana, Kisarazu, Chiba 292-0812, Japan
(E-mail:genomics@hri.co.jp, Tel:81-438-52-3951, Fax:81-438-52-3952)
NEDO human cDNA sequencing project supported by Ministry of
Research Association for Biotechnology (RAB); cDNA full insert sequencing:
Research Association for Biotechnology (RAB); cDNA library
Construction: Helix Research Institute (HRI) (supported by Japan
Rey Technology Center etc.); 5'- 6 3'-end one pass Sequencing: RAB,
HRI, and Biotechnology Center, National Institute of Technology and
Evaluation; clone selection for full insert sequencing: RAB and
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Ishibashi, T. Kanehori, K., Yosida, M., Watanabe, S., Ishida, S.,
Ishibashi, T., Kanehori, K., Yosida, M., Takiguchi, S.,
Kusano, J., Watanabe, M., Fujimori, K., Tanal, H., Ishida, M.,
Yamashita, H., Chiba, Y., Sugiyama, T., Irie, R., Otsuki, T., Sato, H.,
Wakamatsu, A., Ishii, S., Yamamoto, J., Isono, Y., Kawai-Hio, Y.,
Saito, K., Nishikawa, T., Kimura, K., Matsuo, K., Nakamura, Y.,
Sekine, M., Kikuchi, H., Kanda, K., Wagatsuma, M., Takahashi-Fujii, A.,
Oshima, A., Sugiyama, A., Rawakami, B., Suzuki, Y., Sugano, S.,
NEDO human cDNA sequencing project
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
moderately
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                                                                              aatttaccagatcccctccacagccatcgcatggtctgtgtatgagttcttcaaatacct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens cDNA FLJ32220 fis, clone PLACE6003850, moder:
similar to Homo sapiens mitochondrial solute carrier mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
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/clone_lib="PLACE6"
/note="cloning vector: pME18SFL3"
1 405 c 375 g 423 t
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99.8%; Pred. No. 8.7e-152;
tive 0; Mismatches 1;
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/db_xref="taxon:9606"
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2 (bases 1 to 1588)
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Matches 519; Conservative
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/tissue_type="Mammary tumor. C3(1)-Tag model. Infiltrating ductal carcinoma. 5 month old virgin mouse." /clone_lib="NOI_CGAP_Mam6" /lab_host="DHIOB"
                                                                                                                                                                                                                                                                                                /translation="MNPAEVVKQRMQMYNSPYHRVTDCVRAVWQNEGACAFYRSYTTQ
LTMNVPFQAIHFWTYEFLQEHFNPQRRYNPSSHVLCGACAGAVADAATTPLDVCKTLL
                                                                                                                                                                                                                                                                                                                                NTQESLALNSNITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYE
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 This clone was selected for full length sequencing because passed the following selection criteria: Hexamer frequency analysis.
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                                                                                                                                                                                                                                                                                                                                                                                                                             Score 504; DB 10;
Pred. No. 2.9e-147;
                                                                                                           /clone="MGC:37028 IMAGE:4949779"
                                                                                                                                                                                                                                     /product="Similar to putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACAAAGCGGCAAGAGGAATGGAGGGCAGGCAAGTGA 721
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                                                                                                                                                                                   /note="Vector: pCMV-SPORT6"
188. .721
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                 /protein_id="AAH23172.1"
/db_xref="GI:18606248"
                                                                               musculus"
                                                                            /organism="Mus muscul
/db_xref="taxon:10090
                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                 263 g
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92.2%;
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Series: IRAK Plate: 60 Row: h Column: 15
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 1072)
Strausberg, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (04 FEB-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
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Martin, R.G., Muzny, D.M.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing Day: Baylor College of Medicine Human Genome
Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NIH-MGC Project URL: http://mgc.nci.nih.gov
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Web site: http://www.hgsc.bcm.tmc.edu/cdna/
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Lawrence,
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Yoon, V.S., Kowis, C.R., Lawren
Richards, S., Gibbs, R.A.
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On Dec 20, 2001 this sequence version replaced gi:15627972.
                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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Assembly program: Phrap; version 0.990329First call to
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Contact: hgsc-help@bcm.tmc.edu
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NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently consists of 33 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as arbitrary. Gaps between the contigs are represented as This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
Consensus quality: 205303 bases at least Q30 Consensus quality: 209366 bases at least Q20 Estimated insert size: 209880; sum-of-contigs estimation Quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 3.9x in Q20 bases; sum-of-contigs estimation
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Indels

Length 483;

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Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 401)
Williams,L.T., Escobedo,J., Innis,M.A., Garcia,P.D., Klinger,J.,
Kassam,A., Reinhard,C., Randazzo,F., Kennedy,G.C., PoCt,D.,
Labon,A., Reinhard,R., Crkenjakov,R., Drmanac,S., Dickson,M.,
Labat,I., Leshkowitiz,D., Kita,D., Garcia,V. and Strache-Grain,B.
Human genes and gene expression products
Patent: WO 0102568-A 1912 11-JAN-2001;
CHIRON CORPORATION (US); HYSEQ, INC. (US)
                                                                                                                                                                                                                                                                                                                        caagcagaggatgcagatgtacaactcaccataccaccgggtgacagactgtgtacgggc 344
                                                                                                                                                                                                                                                                                                                                                                                      agtgtggcaaaatgaaggggccggggccttttaccgcagctacaccacccagctgaccat 404
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                                                                                                                                                                                                                                                          15 GTTAAAAAAGACATTGAGGTGACGTAATCCACCCAGGGGGCAATAGCCATTGCATGG 74
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School Juridical Person Nihon University (JP)
Location/Qualifiers
                                                                                                                                                                      Score 417.8; DB 6;
Pred. No. 3.9e-120;
0; Mismatches 32;
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/organism="Homo sapiens"
/db_xref="taxon:9606"
1. .401
                                                                        /organism="Mus musculus"
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104 c 120 g
                                                                                     /db_xref="taxon:10090"
139 c 121 g
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VERSION
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AUTHORS
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                 99151
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                                                                                                                                                                                                                                                                                                    Length 221062;
215584: gap of unknown length
216969: contig of 1385 bp in length
217069: gap of unknown length
218358: contig of 1289 bp in length
218458: gap of unknown length
219886: contig of 1428 bp in length
21986: gap of unknown length
221062: contig of 1076 bp in length.
                                                                                                                                                                                                                                       3487 others
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Pred. No. 1.6e-135;
0; Mismatches 33;
                                                                                                                                                                    /organism="Rattus norvegicus"
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                                                                                                                                                                                                                   /clone="CH230-24M6"
50577 c 49732 g 58877 t
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                                                                                                                                                                                  /db_xref="taxon:10116"
/chromosome="Rf1"
                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX306258.1 GI:17645513
                                                                                                                                                                                                                                                                                                58.5%;
93.7%;
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Best Local Similarity 93.77
Matches 487; Conservative
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PAT 25-JAN-2001

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REFERENCE AUTHORS TITLE

RESULT 11

AX306258 LOCUS

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ACCESSION VERSION

KEYWORDS SOURCE

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Matches

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Gaps

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GRLSGMANAFRTVYQLNGLAGYFKGIQARVIYQMPSTAISWSVYEFFKYILTKRQLEN
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                                                                                                                                                           aggattataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
                                                                                                                                                                                                          598 tcacacattacaggacatatcacaggcatggctagtgccttcaggacggtatatcaagta 657
                                                                                                                                                                                                                                                                                                                                             atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                                                                                                                                                                                                                             aacccaagctcccacgtcctctggagcttgcgcaggagctgtagctgccgcagcaca
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complete cds.
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                                                                                      Score 387.8; DB 10;
Pred. No. 1.3e-110;
0; Mismatches 237;
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AF223466
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                                                                                      Query Match
Best Local Similarity 69.3%;
Matches 543; Conservative C
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/protein_id="AaL23859.1"
/db_xref="G1:16506178"
/translation="MELRGGVGNQAAGRRMDGDCRDGGCGSKDAGSEDYENLPTSAS
VSTHWTAGAAAGILEHSIMYPVDSYKTRMGSLNPDPKARYTSIYGALKRIMHTBGFWR
PLRGLNVWMMGAGPAHAMYFACYENMKRTLNDVFSHQGNSHLANGVAGSMATLLHDAV
MNPAEVVKQRLQMYNSQHQSAFSCIRTVWRTEGLGAFYRSYTTQLTMNIPFQSIHFIT
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Mus musculus mitochondrial solute carrier-like protein mRNA,
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
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                                                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                            tacttcatgatgcagccatgaaccctgcggaagtggtcaagcagaggatgcagatgtaca 307
                                                                                                                                                                                          ggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaaagacattgagtgatg 187
                                                                                                                                         taagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaacagggggg 127
                                                               Gaps
                                                                                                    67
                                                                                                                                                                                                                                                         TACTTCATGATGCAGCCATGAACCCTGCGGAAGTGGTCAAGCAGGATGCAGATGTACA
                                                                                      8 gtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggaggatta
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Li,Q.-z., Shi,J.-D., Cruz,P., Echenrode,S., Ruan,Q.-G. and
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Li,Q.-Z., Ruan,Q.-G., Eckenrode,S., Shi,J.-D., Cruz,P.,
and She,J.-X.
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Unpublished
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                                     Length
                                                 5.2e-112;
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/note="50E12"
                                                            392; Conservative
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Direct Submission
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                                               Similarity
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                                     Query Match
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SOURCE ORGANISM

REFERENCE AUTHORS

TITLE JOURNAL

DEFINITION

AF288621

ACCESSION VERSION KEYWORDS source

PEATURES

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TITLE JOURNAL

AUTHORS

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Best Local Similarity
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                       Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z. Direct Submission
Direct Submission
Submitted (12-JAN-2000) Chinese National Human Genome Center at Shanghai, 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201203, China Location/Qualifiers
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                                                                                                                                                            Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z. A novel gene expressed in human hypothalamus Unpublished
2 (bases 1 to 1429)
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68.7%; Pred. No. 1.2e-103;
1ive 0; Mismatches 239;
                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
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1. .1429
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PLRGLNVMMAGAGPAHAWYFACYENMKRTLNDVFSHQGNSHLANGILKAFVWSWEALL
SGASSPCPSNLHAPROYENSRYT"
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Eukaryota Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 5869)
Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       novel mouse mitochondrial carrier protein gene is up-regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (15-MAR-2001) Department of Pathology, Immunology and Laboratory Sciences, University of Florida, 1600 SW Archer Road, Room D6-15, Gainesville, FL 32610, USA
99t9999tgaccgcctatttccqagggtgcaggccagagtaatttaccagatccctcc 717
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Pred. No. 5.7e-77;
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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	ID	,	AAF27733	AAC90457	AAI58875	AAC74843	AA215876	AAS03906	AAS62787	AAH22162
	DB	22	22	21	22	21	20	22	24	22
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Zhang J;
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Yang Y,
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100.0%; Pred. No. 2.5e-245;
ive 0; Mismatches 0;
                                                       Asundi V, Chen R, Ma Y,
Wehrman T, Xu C, Xue AJ,
Goodrich R, Drmanac RT;
                                                                                                                                                           useful
                                                                                                                                                                                                      Claim 1; SEQ ID NO 4650; 10078pp; English
                                                                                                                                                          Novel nucleic acids and polypeptides, us such as central nervous system injuries
29-NOV-2000; 2000US-0727344.
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P-PSDB; AAM41505.
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Wang Z, W
Zhou P,
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The present invention provides the protein and coding sequences for 43 movel human transport proteins (designated TPPPs). These can be used in the diagnosis and treatment of transport, metabolic, neurological, reproductive, cardiovascular and immune disorders, and cell proliferative
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neurological disorder; cardiovascular disorder; reproductive disorder;
immune disorder; cancer; ss.
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treatment of disorders associated
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accccactggacgtttgcaaaacactgctcaacaccccaggagtccttggctttgaactca
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Ju DAM, Au-Young J, Patterson
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P-PSDB; AAB60113.
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10-AUG-1999;
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                                          Homo sapiens
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antirheumatic; antiproliferative; cardiant; vasotropic; cerebroprotective; neuroprotective, antibacterial; opthalmological; gastrointestinal; nephrotropic; gynaecological; vulnerary; thrombolytic; ene therapy; cancer; wound; infectious disease; thrombosis; arthritis; gene therapy; cancer; wound; infectious disease; thrombosis; arthritis;
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the encoded polypeptides (AAM3642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral nervous system, such as peripheral nervous injuries, peripheral nervous system diseases, such as Alzheimer's. Parkinson's disease, Huntington's disease, such as Alzheimer's varkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-brager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression, Activin/Inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, arthritis and inflammation, leukaemias and C.N.S. disorders.
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                                                                                  treating
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                                                                                                                                                              Claim 1; SEQ ID NO 1078; 10078pp; English
                                                                               polypeptides, us
system injuries
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2001-442253/47
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Matches 793; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                     antianaemic; gene therapy; cancer; proliferative disorder; hypertension; neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAC7446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective; vois osteopathic; anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
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                                                                                                                                                                                                                                                                                                     Human ORFX ORF398 polynucleotide sequence SEQ ID NO:795
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                                                                                                                                                                                                                            BP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            thrombosis; contraceptive; ss
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02-APR-1999; 99US-0127636.
05-APR-1999; 99US-0127728.
30-MAR-2000; 2000US-0540763.
                                                                                                                                       tggagggctggcaagtga 798
                                                                                                                                                    (first entry)
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                  antinflammatory; antibacterial; antiviral; antifugal; antirheumatic; antinflammatory; antibacterial; antiviral; antifugal; antirheumatic; the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORRY-associated disorder. The nucleic acids can be used to express ORRY proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupus erythematosus, severe combined immunodeficiency (SCID). AIDS, viral, blacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic aneemia, burns, wounds, bone and cartilage damage, nocturnal hemoglobinuria, antinflammatory disease; to enhance coagulation; to inhibit thrombosis; and as a contraceptive.
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antidiabetic; hypotensive; dermatological; immunosuppressive;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 695; DB 21;
Pred. No. 2.9e-212;
0; Mismatches 0;
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89.6%;
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Best Local Similarity 89.6
Matches 798; Conservative
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                                                         caggccagagtaatttaccagatcccctccacagccatcgcatggtctgtgtatgagttc 1017
898 gctagtgccttcaggacggtatatcaagtaggtggggtgaccgcctatttccgaggggtg 957
                                                                                                                                                                                                                                                                                                                        detection; mapping; tissue typing; profiling; forensic; cancer;
genetic analysis; colorectal cancer; breast cancer; lung cancer; ss.
                           caggccagagtaatttaccagatcccctccacagccatcgcatggtctgtgtatgagttc
                                                                                                                                                                                                                                                                                                          Human; gene; gene expression product; diagnosis; therapy; probe;
                                                                                Human gene expression product cDNA sequence SEQ ID NO:3345.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel human genes and their expression products which are differentially expressed in different cell types
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Escobedo J, Garcia PD, Garcia V, Giese K, Innis MA;
Jones WL, Kassam A, Kennedy GC, Kita D, Labat I;
Lamson G, Leshkowitz D, Pot D, Randazzo F, Reinhard
Stache-Crain B, Sudduth-Klinger J, Williams LT;
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                                                                                                                                                                                     AAZ15876 standard; cDNA; 710
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98US-0072910.
98US-0075954.
98US-0080114.
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                                                                                                                                                                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
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31-MAR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gaaaagttaaaaaaagacattgagtgatgtaatccaccctggggggcaatagccatattgcc 219
                                                                                                                                                                                                                                   cgggcagtgtggcaaaatgaaggggccgggggccttttaccgcagctacacccagctg 399
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                                                                                                                                                                         Gaps
diagnosis, prognosis and management of colorectal cancer, breast can and lung cancer. The polynucleotides can also be used to screen for peptide analogues and antagonists.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   aatggtgcggccgggtgtgtgtggcaacattacttcatgatgcagccatgaaccctgcggaa
                                                                                                                                                                                                                                                                                                            gtggtcaagcagaggatgcagatgtacaactcaccataccaccgggtgacagactgtgta
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                                                                                                                                 80.1%; Score 639; DB 20; Length 710; 100.0%; Pred. No. 1.9e-194;
                                                                                                                                                                         Indels
                                                                         Sequence 710 BP; 186 A; 187 C; 183 G; 154 T; 0 other;
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                                                                                                                                                                       0; Mismatches
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                                                                                                                                                                         Conservative
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Matches 639; Conserv
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Sequence 2037 BP; 475 A; 522 C; 524 G; 515 T; 1 other;
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                                                                                                                                                                                                                                                                                                                                                               Sequences AASO3873-AASO3922 represent isolated nucleic acid molecules and and their related nucleic acids can be used in the diagnosis of or susceptibility to a pathological condition by determining the presence or susceptibility to a pathological condition by determining the presence or absence of a mutation in a nucleic acid or the presence or amount of expression of a secreted protein. The sequences are used to prevent, treat or ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The antibodies to the polypeptides can also be used in alleviating symptoms associated with disorders and in diagnostic immunoassays e.g. radioimmunoassays or enzyme linked immunosorbent assays (ELISA). The disorders include autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative disorders e.g. carbovascular disorders e.g. corneal infection. The peptides can also be used to aid wound healing and epithalial call call prevent skin ageing due to sunburn, to maintain and cygans before transplantation, to regenerate tissues, in chemotaxis and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                       Forty one nucleic acid molecules encoding human secreted proteins, useful in the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases -
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                                                                                                                                                                                                                                                                                                                                            Disclosure; Page 460-461; 518pp; English.
                                                                                                                                                                                       Ruben SM, Rosen CA;
                                                                                                                                                      (HUMA-) HUMAN GENOME SCI INC.
                                                                                  26-SEP-2000; 2000WO-US26324
                                                                                                                    990S-0155807
                                                                                                                                                                                                                                         P-PSDB; AAU01950, AAU01989.
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                WO200123598-A1.
                                                                                                                                                                                       Komatsoulis G,
                                                                                                                  27-SEP-1999;
                                                05-APR-2001.
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Best Local Si
Matches 576
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Human secreted protein; hyperproliferative disorder; autoimmune disorder;
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                                                                                                                                                                                                                                                                                                           encoding the secreted proteins. The sequences of the invention are useful for treating diseases such as hyperproliferative disorders (e.g. cancer), immune deficiency disorders (e.g. severe combined immunodeficiency (SCID)), autoimmune disorders (e.g. multiple sclerosis), blood disorders (e.g. thrombocytopaenia), inflammatory disorders (e.g. arthritis) and infectious disorders (e.g. hepalitis). The polynucleotide sequences of the invention are also useful in gene therapy. AAS62214-AAS62838 represent the CDNA sequences of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RJ;
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                                          tecttggetttgaactcacacattacaggacatatcacaggcatggetagtgeettcagg
                                                                                                                                         acggtatatetcaagtaggtgggtgaccgcctatttccgaggggtgcagggccagagtaatt
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA sequence #574 encoding novel human secreted protein.
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/product= "mitochondrial solute carrier (hMSC-homologue)"
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                                                 ggtgcggccgggtgtgtggcaacattacttcatgatgcagccatgaaccctgcggaagtg 1197
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                 Gaps
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                                                                                                                                                                 aaccccagagacggtacaacccaagctcccacgtcctctggagcttgcgcaggagct
                 1;
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                 Indels
 Length
                 5:
Score 556; DB 24;
Pred. No. 1.3e-167;
                                                                                                                                                                                                                                                                                                                                         actaaaaggcaagaagtggagggctggcaagtga 798
               0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 379..909
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69.78;
99.08;
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                 Conservative
        Similarity
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                 570;
Query Match
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                                                                                              New human mitochondrial solute carrier (hMSC) protein isomer and its
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                                                                                                                                                                   protein, designated hMSC-homologue, which is expressed in human hypophysis. Also described are methods for the preparation and detection of hMSC-homologue protein and nucleotide sequences. The present sequence encodes hMSC-homologue, as given in the present
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                                                                                                                                                                                                                                                                               Length 997;
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                                                                                                                                                           The present invention describes a human mitochondrial
                                                                                                                                                                                                                                         Sequence 997 BP; 240 A; 261 C; 242 G; 254 T; 0 other;
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           STATE HUMAN GENE GROUP.
                                                                                                                                 Claim 1; Page 17-18 (disclosure); 22pp; Chinese.
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21-SEP-2000;
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2000US-0251988. 2000US-0256719. 2000US-0251479.

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                                                                                   AAK73320
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                                                                                                                 ANK AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)

amino acid sequences given in AAM82170 to AAM91921. (I) have cytostatic
activity, and can be used in gene therapy and vaccine production. (I)
proteins and polynucleotides may be used in the prevention, diagnosis and
treatment of diseases associated with inappropriate (I) expression. For
example, they may be used to treat disorders associated with decreased
expression by rectifying mutations or deletions in a patient's genome
that affect the activity of (I) by expressing inactive proteins or to
supplement the patients own production of (I). Additionally, (I)
c supplement the patients own production of (I). Additionally, (I)
to polynucleotides may be used to produce the secreted (I), by inserting
the nucleic acids into a host cell and culturing the cell to express the
protein. (I) proteins and polynucleotides may be used to prevent,
diagnose and cancer metastases of haematopoietic diseases, especially
c ancers and cancer metastases of haematopoietic antigen genomic
to AAK87694 represent human immune/hematopoietic antigen genomic
sequences from the present invention. AAK54942 to AAK54950 and AAM82169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis -
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                                                                                                                                                                                                              Disclosure; SEQ ID NO 24591; 3071pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63.7%; Score 508; DB 22; Length 27960; 99.8%; Pred. No. 1.3e-151; ive 0; Mismatches 0; Indels 1;
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                                                                                  Ruben SM;
                                                  (HUMA-) HUMAN GENOME SCI INC.
11-DEC-2000; 2000US-0254097. 05-JAN-2001; 2001US-0259678.
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Matches 519; Conserv
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Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
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20-OCT-2000;
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17-NOV-2000;
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cativity, and can be used in AMMS1210 immunocontrocture and the activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased example, they may be used to treat disorders associated with decreased that affect the activity of (I) by expression in a patient's genome that affect the activity of (I) by expression in a patient's genome that affect the activity of (I) by expression of (I). Additionally, (I) supplement the patients own produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer matestases of haematopoietic artigen genomic to AAK8764 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK54912 to AAK87690 and AAM82169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     represent sequences used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis -
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                                                    2000US-0250391.
2000US-02510301.
2000US-0251988.
2000US-0256719.
2000US-0256719.
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2000US-0251989.
2000US-0251990.
2000US-0254097.
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2000US-0251868.
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05-05C-2000;
05-05C-2000;
06-05C-2000;
06-05C-2000;
08-05C-2000;
08-05C-2000;
08-05C-2000;
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279 agtggtcaagcagaggatgcagatgtacaactcaccataccaccgggtgacagactgtgt 338 339 acgggcagtgtggcaaaatgaaggggccggggccttttaccgcagctacaccagct 398 gaccatgaacgttcctttccaagccattcacttcatgacctatgaattcctgcaggagca 458 1; Gaps 63.7%; Score 508; DB 22; Length 27960; 99.8%; Pred. No. 1.3e-151; 0; Indels 0; Mismatches Best Local Similarity 99.8 Matches 519; Conservative Query Match 399 ŏ g Q ò ò g  $^{\circ}$ 

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The present invention describes a method for examining ischaemic conditions, comprising measuring the expression levels of particular genes [1] in a test sample or determining the expression profile of a gene group in the sample congrising genes selected from [1]. The method is useful for examining the ischaemic condition (e.g. compressive ischaemia, occlusive ischaemia or vasospastic ischaemia) by measuring expression levels of particular genes (ABB9912, to ABB9912, encoding the protein sequences in ABB97020 to ABB9912, to ABB9912, encoding expression profile of a gene group comprising these genes. The expression levels or expression profiles produced by these genes are used as an indicator when screening for ischaemic condition-improving drugs or therapeutics for ischaemic condition related sequence, represent to a mouse ischaemic condition related sequence,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Examining the ischemic condition (e.g. occlusive ischemia) by measuring expression levels of particular genes defined in the specification or by determining the expression profile of a gene group comprising these
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                 21144 ggagtccttggctttgaactcacacattacaggacatatcacaggcatggctagtgcctt
                                                                                  ggagtccttggctttgaactcacacattacaggacatatcacaggcatggctagtgcctt
                                                                 caggacggtatatcaagtaggtggggtgaccgcctatttccgaggggtgcaggccagagt
                                                                                                                                  aatttaccagatcccctccacagccatcgcatggtctgtgtatgagttcttcaaatacct
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                                                                                                                                                                                              Nagata T,
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mson G, Drmanac R;
                    165 gttaaaaaagacattgagtgatgtaatccaccctgggggcaatagccatattgccaatgg
                                                                tgcggccgggtgtgtgtggcaacattacttcatgatgcagccatgaaccctgcggaagtggt
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Or
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Leshkowitiz
 Indels
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nedy GC, Pot D, Lam
ckson M, Labat I, L
Strache-Crain B;
32;
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Mismatches
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Kennedy GC,
Dickson M,
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Conservative
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HYSEQ INC.
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cancer; lunc
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Matches 437;
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                                                           The present sequence is one of 3351 sequences in a library of human polynucleotides. The library is used to detect differentially expressed quese correlated with a cancerous state of a mammalian cell and can detect colon, prostate, breast and lung cancer. The library can be used to produce probes for detection of mRNA and to produce additional copies of the polynucleotides. The probes can be used for chromosome mapping of the polynucleotide and for detection of transcription levels. Ribozymes or antisense oligonucleotides can be generated. The polynucleotides and their gene products are used as genetic or biochemical markers (e.g. in blood or tissues) that will detect the earliest changes along the carcinogenesis pathway and/or monitor the efficacy of theraphes and preventions. The polynucleotides and
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vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibodies against them can be used in pharmaceutical compositions to treat the cancers and proliferative disorders such as neoplasia, dysplasia and hyperplasia.
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AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary; antiparkinsonian; nootropic; neuroprotective; osteopathic; antiparkinsonian; nootropic; neuroprotective; osteopathic; antiparkinsonian; antiarthritis; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antidiabetic; hypotensive; dermatological; antithropic; antidiabetic; hypotensive; dermatological; antithropic; antidiamatory; antidianemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORFX-associated disorder. The nucleic acids can be used to express ORFX proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, confidentive disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autofimnume disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
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02-APR-1999; 99US-0127636.
05-APR-1999; 99US-0127728.
30-MAR-2000; 2000US-0540763.
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P-PSDB; AAB42980.
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The invention relates to a novel human mitochondrial solute carrier protein, hMSC-o (AAB60658), and cDNA encoding it (AAF59920). hMSC-o is expressed in normal human hypothalamus tissue. The invention also relates to the preparation of hMSC-o proteins and nucleic acids, and the detection of hMSC-o proteins and nucleic acids in a sample. The present sequence represents cDNA encoding hMSC-o.
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Page 19-20; 21pp; Chinese.
Claim 1;
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Sequence 1305 BP; 292 A; 388 C; 363 G; 262 T; 0 other;
                                                     Score 365.6; DB 22;
Pred. No. 1.3e-106;
0; Mismatches 239;
                                                     Query Match
Best Local Similarity 68.7%;
Matches 533; Conservative
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NAME: Dinner, Dara L.
REGISTRATION NUMBER: 33,680
REFERENCE/DOCKET NUMBER: C70
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TELEPHONE: 610-270-5017
TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 1311 base pairs
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STRANDEDNESS: unknown
TOPOLOGY: unknown
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; STRAIN: Ben Alder
US-09-068-140A-9
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Sequence 45, Appli
Patent No. 5223423
Sequence 374, App
Sequence 2, Appli
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Copyright (c) 1993 - 2000 Compugen Ltd.
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US-08-934-613-61
US-08-933-750C-61
US-08-933-750C-68
US-09-234-613-68
US-08-937-466-5
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SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
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CORRESPONDENCE ADDRESS: ADDRESS: ADDRESSE: SmithKline Beecham Corporation STREET: 709 Swedeland Road
Score 81.2; DB 4;
Pred. No. 1.1e-16;
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; Sequence 14, Application US/09068140A
Patent No. 6281409
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPUTER:
10.2%;
50.2%;
                                      Matches 274; Conservative
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CITY: King of Prussia
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COUNTRY: USA
ZIP: 19406-0939
                     Similarity
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CLASSIFICATION:
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  Query Match
                       Best Local
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3391 AAGCCCTTGGGTCGATACTGAAAGTTGAAGGTCCCGCCGGACTTTACCGTGGCATTGGTG 3450
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 5150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 81.2; DB 4;
Pred. No. 2.2e-16;
0; Mismatches 248;
FILING DATE: NO. 6281409ember 4, 1996 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 61, Application US/08933750C Patent No. 5932442
                                    NAME: Dinner, Dara L.
REGISTRATION NUMBER: 33,680
REFERENCE/DOCKET NUMBER: C70
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5017
                                                                                                                                                                                                                                                                                          MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.2%;
50.2%;
                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 5150 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Ribes nigrum
STRAIN: Ben Alder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 10.2
Best Local Similarity 50.2
Matches 274; Conservative
                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
                                                                                                                                    TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                            unknown
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ORIGINAL SOURCE:
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US-08-933-750C-61
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1020 CTTCAAGGGCCTGTCCCCCAGCTTGCTGAAGGCTGCCCTCTCCACAGGCTTCATGTTCTT 1079
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Pred. No. 0.046;
0; Mismatches 79; Indels 0
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                                                                                   APPLICANT: Yue, Henry
APPLICANT: Guegler, Karl J.
APPLICANT: COTLEY, Neil C.
TITLE OF INVENTION: HUMAN REGULATORY MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                  SYSTEM: DOS
FastSEQ for Windows Version 2.0
                                                                                                                                                                                                           E: Incyte Pharmaceuticals, Inc 3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PF-0356 US
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APPLICATION NUMBER: US/08/933,750
FILING DATE: September 23, 1997
ATTORNEY/AGENT INFORMATION:
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US-08-933-750C-68
; Sequence 60, Application US/08933750C
; Patent No. 5932442
; GENERAL INFORMATION:
APPLICANT: Hillman, Jennifer L.
APPLICANT: Bandman, Olga
                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/234,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEPHONE: 415-845-4166
    Hillman, Jennifer L.
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                                             Shah, Purvi
Au-Young, Janice
                                                                                                                                                                                                                                                                                                                                                                          IBM Compatible
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LENGTH: 1594 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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Best Local Similarity 51.55
Matches 84; Conservative
                                                                                                                                                                                                                                                                                                                                                     Diskette
                                                                                                                                                                NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
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MEDIUM TYPE: Diskett
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SOFTWARE: FastSEG
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IMMEDIATE SOURCE:
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US-09-234-613-61
                                                                                                                                                                                                                                                                                             USA
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                                                                                                                                                                                                                                                                                                              94304
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                                                                                                                                                                                                                                                      CITY: Palc
STATE: CA
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                                                                APPLICANT:
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                                                                                                                          APPLICANT: Guegler, Karl J.
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: HUMAN REGULATORY MOLECULES
MUMBER OF SEQUENCES: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                              ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
CITY: Palo Alto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/933,750C
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                 Lal, Preeti
Hillman, Jennifer L.
Bandman, Olga
Shah, Purvi
Au-Young, Janice
Yue, Henry
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Billings, Lucy J. REGISTRATION NUMBER: 36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-845-0555
TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM COMPATIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 1594 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
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CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS
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CLONE: 207452
US-08-933-750C-61
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Best Local Similarity
Matches 84; Conservat
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                                                                                                                                                                                                                                     94304
                                                                                                                                                                                                                                                                                      CITY: Palc
STATE: CA
                                  APPLICANT:
APPLICANT:
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386 acaccacccagctgaccatgaacgttcctttccaagccattcacttcatgacctatgaat 445
                                                                   836 GGGCCCCCACTGCCCTTCGAGATGTGCCCTTCTCAGCCCTGTACTGGTTCAACTATGAGC 895
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Pred. No. 0.073;
                                                                                                                                               896 TGGTGAAGAGCTGGCTCAATGGGCTCAGGCCGAAGGACCAGACTTC 941
                                                                                                                446 tectgeaggageaetttaaeeeeeagagaeggtaeaaeeeaagete 491
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Yue, Henry
APPLICANT: Guegler, Karl J.
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: HUMAN REGULATORY MOLECULES
NUMBER OF SEQUENCES: 98
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/234,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3: Incyte Pharmaceuticals, Inc. 3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: September 23, 1997
ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-0356 US
TELECOMMUNICATION INFORMATION:
TELEDHONE: 415-9855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/933,750
                                                                                                                                                                                                                                                                               Sequence 68, Application US/09234613
Patent No. 6132973
                                                                                                                                                                                                                                                                                                                                                  Lal, Preeti
Hillman, Jennifer L.
Bandman, Olga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.58;
                                                                                                                                                                                                                                                                                                                                                                                                                       Shah, Purvi
Au-Young, Janice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
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Matches 205; Conservative
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STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
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CLONE: 724157
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                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: Lal, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 3174 PO CITY: Palo Alto
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                                                                                                                                                                                                                                   RESULT 6
US-09-234-613-68
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US-09-234-613-68
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                APPLICANT: Au-Young, Janice
APPLICANT: Yue, Henry
APPLICANT: Yue, Henry
APPLICANT: Cociey, Neil C.
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: HUMAN REGULATORY MOLECULES
NUMBER OF SEQUENCES: 98
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/O8/933,750C
FILING DATE: September 23, 1997
CLASSIFFCATION: 536
PROR APPLICATION: 536
PROR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 36; DB 2;
Pred. No. 0.073;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: PF-0356 US
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
                                                                                                                                                                                   E: Incyte Pharmaceuticals,
3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
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LENGTH: 1643 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
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Matches 205; Conservative
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Shah, Purvi
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MEDIUM TYPE: Diskett
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CLONE: 724157
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CITY: Palo Alto
STATE: CA
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IMMEDIATE SOURCE:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/232,463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: DORNER, F.
APPLICANT: SCHEIFLINGER, F.
APPLICANT: FALKNER, F. G.
TITLE OF INVENTION: RECOMBINANT FOWLPOX VIRUS
NUMBER OF SEQUENCES: 52
CORRESPONDENCE ADDRESS:
ADDRESSEE: Foley & Lardner
STREET: 1800 Diagonal Road, Suite 500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29,768
29,768
PPR: 30472/114 IMMU
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FILING DATE: 26-AUG-1991
ATTORNEY, AGGENT INFORMATION:
NAME: BENT, Stephen A.
REGISTRATION NUMBER: 29,768
REFERENCE/DOCKET NUMBER: 30472/114 IMM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)836-9300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/07/935,313
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ZIP: 22313-0299
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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Patent No. 5670367
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TELEX: 999149
INFORMATION FOR SEQ ID NO: 14:
SEQUENCE CHARACTERISTICS:
LENGTH: 7218 base pairs
TENGTH: 7218 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
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US-08-232-463-14/C
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                                                                                                        4.4%; Score 35; DB 1; Length 7218;
1.1%; Pred. No. 0.33;
.ve 183; Mismatches 148; Indels
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SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/937,466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 75 DENISE DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Zhang, Ning
APPLICANT: Amaral, M. Catherine
APPLICANT: Chen, Jin-Long
TITLE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 5, Application US/08937466 Patent No. 5846779
                                                                                                          Query Match
4.4%; Soc
Best Local Similarity
4.1%; Prec
Matches 14; Conservative 183;
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TELEFAX: (650) 343-4342
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1777 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: T9
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
           , CLONE: pTZgpt-Fls
US-08-232-463-14
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STATE: CALIFORNIA
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IMMEDIATE SOURCE:
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630 GCCCAG 635
STRANDEDNESS:
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           ; TOPOLOGY: 1;
; MOLECULE TYPE:
US-09-172-528-5
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                                                                                                                                               244 acattacttcatgatgcagccatgaaccctgcggaagtggtcaagcagaggatgcagatg 303
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                                                                                                                                                                                                                                                      390 cagagegracagracegegracegegraceraceracereargracegegegegegegera 449
                                                                                                                                                                                                                                                                                           364 googgggcottttaccgcagctacaccacccagctgaccatgaacgttcctttccaagcc 423
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                                                                                                                                                                                330 ACTITICCCCIGGACACCGCCAAGGICCGICIGCAGAICCAAGGGGAGAACCCAGGGGCT 389
                                                                                                           Gaps
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                                                                    Length 1777;
                                                                    Score 32.4; DB 2; Length 1 Pred. No. 1.1; 0; Mismatches 171; Indels
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SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/172,528
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/937,466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Zhang, Ning
APPLICANT: Amaral, M. Catherine
APPLICANT: Chen, Jin-Long
TILE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-172-528-5; Sequence 5, Application US/09172528; Patent No. 5952469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
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REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: T97
TELECOMMUNICATION INFORMATION:
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TELEFAX: (650) 343-4342
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1777 base pairs
                                                                          4.18;
                                                                                         44.18;
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                                                                      Query Match
Best Local Similarity 44.13
Matches 135; Conservative
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STATE: CALIFORNIA
COUNTRY: USA
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 CDNA
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APPLICANT: Zhang,
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; MOLECULE TYPE:
US-08-937-466-5
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                                                                                                                               Score 32.4; DB 2;
Pred. No. 1.1;
0; Mismatches 171;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zhang, Ning
APPLICANT: Zhang, Ning
APPLICANT: Amaral, M. Catherine
APPLICANT: Chen, Jin-Long
TITLE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 75 DENISE DRIVE
CITY: HILLSBOROUGH
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 343-4341
TELEFAX: (650) 343-4342
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/937,466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 5, Application US/09318199
Patent No. 6025469
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NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
                                                                                                                                    4.18;
                                                                                                                                                          44.18;
                                                                                                                                                          Best Local Similarity 44.1
Matches 135; Conservative
double
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INFORMATION FOR SEQ ID NO: 5:
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                                                                                                                                                                                                     Gaps
                                                                                                                                                                Length 1777;
                                                                                                                                                         4.1%; Score 32.4; DB 3; Length 1 ilarity 44.1%; Pred. No. 1.1; Conservative 0; Mismatches 171; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPACATOR OPERATING SYSTEM: PC-DOS/MS-DOS COFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP STREET: 75 DENISE DRIVE CITY: ILLLSBOROUGH STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/937,466
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, Application US/09503579; Patent No. 6248561; GENERL INFORMATION:
APPLICANT: Zhang, Ning
APPLICANT: Chen, Jin-Long
TITLE OF INVENTION: UCP3 Genes
'NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: T97-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 94010
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
~MEDIUM TYPE: TOOPY disk
~MEDIUM TYPE: TOOPY AND TOOS/MS.
LENGTH: 1777 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (650) 343-4342
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APPLICATION NUMBER: US
FILING DATE:
                TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
                                                                                                                                                                            Best Local Similarity
Matches 135; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
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Best Local 9
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                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                    Score 32.4; DB 4; Length 1 Pred. No. 1.1; 0; Mismatches 171; Indels
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APPLICANT: Amaral, M. Catherine
APPLICANT: Chen, Jin-Long
TITLE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES: 6
CORRESPONDENCE S: 6
CORRESPONDENCE ADDRESS:
SITREET: 75 DENISE DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/937,466 FILING DATE:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 3, Application US/08937466
; Patent No. 5846779
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: T9
TELECOMMUNICATION INFORMATION:
TELEBHONE: (650) 343-4341
TELEBAS: (650) 343-4342
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1777 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
US-09-503-579-5
                                                                                                                                                                                                                    Query Match
4.1%;
Best Local Similarity 44.1%;
Matches 135; Conservative
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CITY: HILLSBOROUGH
STATE: CALIFORNIA
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630 GCCCAG 635
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                                                                                                                                                                                               Length 1949;
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/172,528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Zhang, Ning
APPLICANT: Zhang, M. Catherine
APPLICANT: Chen, Jin-Long
TITLE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 75 DENISE DRIVE
CITY: HILLSBOROUGH
STATE: CALIFORNIA
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NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/CDCKET NUMBER: T97-009
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/937,466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-172-528-3
; Sequence 3, Application US/09172528
; Patent No. 5952469
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1949 base pairs
; TYPE: nucleic acid
; TYPE: acid
; STRANDEDNESS: double
; MOLECULE TYPE: CDNA
US-08-937-466-3
                                                                                                                                                                                          Query Match
Best Local Similarity 44.1%;
Matches 135; Conservative
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MEDIUM TYPE: Floppy
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244 acattacttcatgatgcagccatgaaccctgcggaagtggtcaagcagaggatgcagatg 303
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14.1%; Pred. No. 1.2;
Ive 0; Mismatches 171;
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Patent No. 6022469
GENERAL INFORMATION:
APPLICANT: Zhang, Ning
APPLICANT: Chen, Jin-Long
TITLE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES:
CORRESPONDENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/09/318,199
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TELEFAX: (650) 343-4342;
SEQUENCE CHARACTERISTICS:
LENGTH: 1949 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
TOPOLOGY: linear
MOLECULE TYPE: CDNA
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Matches 135; Conservative
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APPLICATION NUMBER:
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STATE: CALIFORNIA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP STREET: 75 DENISE DRIVE CITY: HILLEBOROUGH STATE: CALIFORNIA COUNTRY: USA
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/937,466
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APPLICANT: Amaral, M. Catherine
APPLICANT: Chen, Jin-Long
ATILE OF INVENTION: UCP3 Genes
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 343-4341
TELEFAX: (650) 343-4342
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 1949 base pairs
TYPE: nucleic acid
TYPE: nucleic acid
STRANDEDNESS: double
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COMPUTER: IBM PC compatible
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Matches 135; Conservative
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MEDIUM TYPE: Floppy of
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; MOLECULE TYPE: CDNA
US-09-318-199-3
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US-09-503-579-3
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Job time: 11239 sec
36,627
R: T97-009
                                        REFERENCE/DOCKET NUMBER: T9
TELECOMMUNICATION INFORMATION:
TELEPHONE: (650) 343-4341
                                                                                                                                                                                                                                                                                                                         Query Match 4.1%;
Best Local Similarity 44.1%;
Matches 135; Conservative
                                                                                                                                             LENGTH: 1949 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
    REGISTRATION NUMBER:
                                                                                                                                                                                                                                  ; MOLECULE TYPE: CDNA US-09-503-579-3
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BI794616 ic92e02.y BG295496 602392826

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Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Mathonal to 747)

National Institutes of Health, Mammalian Gene Collection (MGC)

Longublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Consortium (LLNL)

DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL)

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAMILA2 row: a column: 23

High quality sequence stop: 743.

Location/Qualifiers

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603077989F1 NIH_MGC_119 Homo saplens cDNA clone IMAGE:5169694 5′,
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/lab_host="DH10B"
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BF916224
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AK015770
BI045863
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BI339456
BI304641
AI743110
W53634
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AK006155
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BM258580
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BI827322
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JOURNAL
COMMENT
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BI827322
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KEYWORDS
SOURCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
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LOCUS
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Compugen Ltd
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Copyright (c) 1993 - 2000
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Maximum Match 100%
Listing first 45 summaries
                                                            OM nucleic - nucleic search, using sw model
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BG331197
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gb_htc:*
gb_gss:*
em_gss_hum:*
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Matches 598; Conservative
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0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NHM CLibrary." 1 others
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11 H-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
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                                                                                                                     AGTGATGTAATCCACCCTGGGGGCAATAGCCATATTGCCAATGGTGCGGCCGGGTGTGTG
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                                                                                          ;
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                                                                        Length 747;
                                                                        78.8%; Score 628.8; DB 10;
99.4%; Pred. No. 3.9e-172;
Live 0; Mismatches 2;
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BI254253
BI254253.1 GI:14806485
                                                                                          652; Conservative
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/note="Organ: cervix; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.4 kb. Library prepared by Life Technologies.
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: Incyte Genomics, Inc.
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMI1277 row: i column: 07
High quality sequence stop: 825.
High quality sequence stop: 825.
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                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:5114190"
/clone_lib="NIH_MGC_12"
/tissue_type="cervical carcinoma cell
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 587; DB 10;
Pred. No. 6.1e-160;
0; Mismatches 0;
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1 (Dases 1 to 986)

1 (Dases 1 to 986)

1 (Mases 1 to 986)

1 (Mac.noi.nin.gov/.

1 National Institutes of Health, Mammalian Gene Collection (MGC)

1 Unpublished (1999)

2 Contact: Robert Strausberg, Ph.D.

2 Email: cgapbs-rémail.nin.gov

7 Issue Procurement: DCTD/Prp/Gazdar

CDNA Library Preparation: Ling Hong/Rubin Laboratory

CDNA Library Arrayed By: The I.M.A.G.E. Consortium (LINL.)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

http://mage.llnl.gov

Plate: L.CML241 row: m. column: 02

Plate: L.CML241 row: m. column: 02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /Lissue_type="large cell carcinoma"
/Lissue_type="large cell carcinoma"
/Lib_host="DH10B (phage-resistant)"
/note="Organ: lung, Vector: poTB7; Site_1: XhoI; Site_2:
ECORI; cDNA made by oligo-dT priming. Directionally cloned
into ECORI/XhoI sites using the following 5' adaptor:
GGCAGGG(G). Library constructed by Ling Hong in the
laboratory of Gerald M. Rubin (University of California,
Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and
Superscribt II RT (Life Technologies). Note: this is a
NIH MGC Library 193 t
                  27-FEB-2001
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                  BG331197 986 bp mRNA linear EST 27-FEB-
602431907F1 NIH_MGC_18 Homo sapiens cDNA clone IMAGE:4549801 5'
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Pred. No. 1.3e-159;
0; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="NIH_MGC_18"
                                                                                                                                                                                                                                                                                                                                                                                                        High quality sequence stop: 587.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /db_xref="taxon:9606"
/clone="IMAGE:4549801"
                                                                             BG331197.1 GI:13137635
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al Similarity 97.5%;
595; Conservative 0
                                                mRNA sequence.
BG331197
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Best Local (
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Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 576)

Dias Neto,E., García Correa,R., Verjovski-Almeida,S., Briones,M.R.,

Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,

Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,P.H.,

M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and

Simpson,A.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note—"Organ: Diacenta_normal; Vector: puc18; Site_1: SmaI Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
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This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl-QV3&t2-QV3-GN0338-230201-558-a01&t3=2001-02-23&t4=1)
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
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Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000) 20202663
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/db_xref="taxon:9606"
/clone_lib="GN0338"
/dev_stage="Adult"
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High quality sequence start: 18
High quality sequence stop: 575.
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NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)

Lonpublished (1999)

Contact: Robert Strausberg, Ph.D.

Emal: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be
                                                           7;
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                                                            Gaps
                                                                                                                                                                                              223 ggtgcggccgggtgtgtgtggcaacattacttcatgatgcagccatgaaccttgcggaagtg
                                                                                                                                 283 gtcaagcagaggatgcagatgtacaactcaccataccaccgggtgacagactgtgtacgg
                                                                                                                                                                                                                                                                                                                                                                                                                                          343 gcagtgtggcaaaatgaaggggccggggccttttaccgcagctacaccaccagctgacc
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                                   10;
                                  Score 532.2; DB 10
Pred. No. 4.8e-144;
                                                          0; Mismatches
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                                  Ouery Match 66.7%;
Best Local Similarity 99.3%;
Matches 545; Conservative
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908 bp mRNA linear EST 07-MAY-2001 NCI_CGAP_Skn3 Homo sapiens cDNA clone IMAGE:4803681 5',
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Imer: Oligo dT
                                                                                                     /strain="FVB/N"
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Technologies. Note: this is a NCI_CGAP Library. |"
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Pred. No. 1.6e-139;
0; Mismatches 45;
02
                                                                                     /organism="Mus musculus"
                       quality sequence stop: 812
Location/Qualifiers
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         783 AATCACTAAAAGGCAAGAAGAAGAGGGGGGGGCTGGCAAGTGA
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                                                                                                                                Context: Robert Strausberg, Ph.D.
Email: Gapbs-rémail.nih.gov
Tissue Procurement: James Cleaver, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: Libral0699 row: o column: 10
High quality sequence stop: 878.
Location/Qualifiers
CCE 1. 908
                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia; Eutheria; Primates, Catarrhini, Hominidae, Homo. I (bases 1 to 908)
NIH-MGC http://mgc.nci.nih.gov/.
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Pred. No. 9.8e-137;
0; Mismatches 1;
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Best Local Similarity 98.8%;
Matches 574; Conservative
                                                                                                              Unpublished (1999)
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Best Local Similarity
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Email: cgapbs-remail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
CDNA Library Preparation: M. Bento Soares, Ph.D., M. Fatima
Bonaldo, Ph.D.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: NGI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11294 row: j column: 20
High quality sequence start: 7
High quality sequence stap: 809.
Location/Qualifiers
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 855)
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                                                                                                                                                                                                                                                                                                                                                               NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
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Pred. No. 7.6e-133;
); Mismatches 80;
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/strain="CZECH II"
/db_xref="taxon:10090"
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
E 1 (bases 1 to 808)
S NIH-MGC http://mgc.ncl.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Upublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
Tissue Procurement: Jeffrey Green M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC Clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10903 row: f column: 20
High quality sequence stop: 696.

Location/Qualifiers

Location/Qualifiers
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musculus cDNA clone IMAGE:4949779 5',
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                                                                                                                                                                                                               /organism="Mus musculus"
/strain="FVB/N"
/db_xref="taxon:10090"
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602820975F1 NCI_CGAP_Mam6 MusmRN sequence.
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TITLE
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Soares Rattus sp. cDNA clone
                                                                                        /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: Not1; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigator providing samples: Jeffrey Green, M.D., NIH"

240 c 207 g 177 t
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Murinae;
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Lee,N.H., Glodek,A., Chandra,I., Mason,T.M., Quackenbush,J.,
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                                                                                                                                                                                                                                                                          2;
/clone_lib="NCI_CGAP_Mam6"
/sex="female, virgin"
/tissue_type="infiltrating ductal carcinoma"
/dev_stage="5 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                        Length 808;
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                          Indels
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                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                      Score 473; DB 10;
Pred. No. 9.8e-127
0; Mismatches 50
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AW915209 GI:8080897
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Rodentia;
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                                                                                                                                                                                                                                        Query Match 59.3
Best Local Similarity 90.8
Matches 515; Conservative
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Euteleostomi; Sus.

JOURNAL

COMMENT

TITLE

FEATURES

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Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
                                                                                 Fahrenkrug, S.C., Cr., Creking, B.A., Rohrer, G.A., Smith, T.P.L., Casas, E., Stone, R.T., Heaton, M.P., Grosse, W.M., Bennett, G.A., Laegreid, W.W. and Keele, J.W.
Design and use of two pooled tissue normalized cDNA libraries for Unpublished (2000)

Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Vector: pcMv SPORT6; Site_1: Xba1; Site_2: Xho1; Library made from pooled tissue from testis, ovary, endometrium, hypothalamus, pituitary, and placenta."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              290 agaggatgcagatgtacaactcaccataccaccgggtgacagactgtgtacgggcagtgt 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ggcaaaatgaaggggccgggggccttttaccgcagctacaccaccagctgaccatgaacg 409
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             410 ttcctttccaagccattcacttcatgacctatgaattcctgcaggagcactttaacccc 469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121 TTCCCTTCCAAGCCATCCACTTCATGACCTATGAATTCCTGCAGGAGCACTTTAACCCCC 180
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                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
1 (bases 1 to 563)
                                                                                                                                                                                                             USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
TTE1: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24;
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Pred. No. 4.2e-126;
0; Mismatches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Sus scrofa"
/db_xref="taxon:9823"
/clone_lib="MARC_2PIG"
                                                                                                                                                                                                                                                                                                                                                                                                                 Plate: 71 row: A column: 23
Seg primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                             FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
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PCR PRimers
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95.3%;
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                  scrofa
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                Rat
                                                                                                                                                                                                                                                          /.organism="Rattus sp."
/db_xref="taxon:10118"
/clone="RGICM53"
/clone_lib="Normalized rat embryo, Bento Soares"
/dev_stage="embryo 8, 12, 18 dpc"
/note="Vector: pT/T3Pac; Site_1: EcoRI; Site_2: NotI"
a 157 c 131 g 110 t
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                (REST) Catalog &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541 accccactggacgtttgcaaaacactgctcaacacccaggagtccttggctttgaactca
                                       Unpublished (1998)
Contact: Lee, NH
The Institute for Genomic Research
The Institute for Genomic Research
The Institute for Genomic Research
The Institute for Brite, Rockville, MD 20850, USA
Tel: (301)-888-3529
Fax: (301)-888-0208
Email: nhlee@tigr.org
This clone is available through the ATCC, contact the ATCC
tel#703-365-2700 for further information
Seq primer: M13 Reverse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gccattcacttcatgacctatgaattcctgcaggagcactttaacccccagagacggtac
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BF193023
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                EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 472.6; DB 9;
Pred. No. 1.1e-126;
0; Mismatches 34;
                Rat
             Genome Project: Generation of a
Kerlavage, A.R. and Adams, M.D.
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/db_xref="taxon:9606"
/db_xref="taxon:9606"
/clone="INAGE:2871968"
/clone_lib="NCI_CGAP_Lu24"
/tissue_type="carcinoid"
/lab_host="DH108"
/note="Organ: lung; Vector: pT773D-Pac (Pharmacia) with a modified polylinker; Plasmid DNA from the normalized library NCI_CGAP_Lu5 was prepared, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from a pool of 5,000 clones made from the same library (cloneIDs li414920-1417991 and 1520904-1522439). Subtraction by Bento Soares and M. Fatima Bonaldo. 2 others
                                                                                                                                                                       AW341177 581 bp mRNA linear EST 31-JAN-2000 xz95e05.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2871968 3' similar to TR:Q94638 Q94638 MITOCHONDRIAL SOLUTE CARRIER. ;, mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequencing Center information can be
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NCI-GGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (GGAP),
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael
Emmert-Buck, M.D., Ph.D.
421 TCCCCTCCACAGCCATCGCGTGTCTGTGTATGAGTTCTTCAAATACCTGATCACTAAAC 480
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Location/Qualifiers
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Best Local Similarity 97.5%; Pred. No. 2.4e-125;
Matches 474; Conservative 0; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
                                  AW341177.1 GI:6837803
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Unpublished (1997)
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NL Unpublished (1999)
Contact: Robert Strauberg, Ph.D.
Email: capabs-remail.nih.gov
Tissue Procurement: Glibert Smith, Ph.D.
Email: capabs-remail.nih.gov
Tissue Procurement: Glibert Smith, Ph.D.
CDNA Library Arrayed By: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://mage.lln.gov
Plate: LLAM9262 row: a column: 07
High quality sequence stop: 607.
Location/Qualifiers
II. 830
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                                                                                                                                                                                                                                                    335 AGCTGTAGCTNGCCGCACCACACACCCACTGGACGTTTGCAAAACACTGCTCAACACCCA 394
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                                                                                                                                                         275 CTTTAACCCCCAGAGAGGGTACAACCCAAGCTCCCACGTCCTCTCTGGAGCTTGCGCAGG 334
ctttaacccccagagacggtacaacccaagctcccacgtcctctctggagcttgcgcagg
                                                                                                                                                                                                                                                                                                                                                579 ggagtccttggctttgaactcacacattacaggacatatcacaggcatggctagtgcctt
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/lab_host="DH10B"
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/clone="IMAGE:4015758"
/clone_lib="NCI_CGAP_Lu30"
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/strain="CZECH II"
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BACKWARD: GITITCCCAGICACGACG
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Mammalia; Eutheria;
1 (bases 1 to 888)
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Best Local Similarity 94.7
Matches 469; Conservative
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Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
and -minmatch 12 options.
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1 (bases 1 to 578)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Gasas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertaa, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
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                                               283 gtcaagcagaggatgcagatgtacaactcaccataccaccgggtgacagactgtgtacgg 342
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of a gene index for cattle
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536233 MARC 3BOV Bos taurus CDNA 5', mRNA sequence.
BM433098.1 GI:18533417
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PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
Fax: 402 762 4399
 DB 10;
             Pred. No. 4.4e-121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     actaaaaaggcaagaagtggagggctggcaagtga 798
                        0; Mismatches
56.8%; Score 453.6; 92.4%; Pred. No. 4.4
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Genome Res. 11 (4), 626-630 (2001)
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                       477; Conservative
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Contact: Smith TPL
            Similarity
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Query Match
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COMMENT
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Corganism="Bos taurus"

Ab_xref="taxon:9913"

/clone_lib="wARC 3BOV"

/tissue_type="pooled"

/lab_host="bH10B"

/note="vector: pcWV SPORT6; Site_1: Xbal; Site_2: Xhol;

Library made from pooled tissue from marrow, alveolar

macrophage, ovary, fetal semitendonosus muscle, and fetal

a 184 c 141 g 114 t
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                                                                                                                                                                                                                                                                                                                                                                  DB 10;
                                                                                                                                                                                                                                                                                                                                                                  Score 453.4; DB 10;
Pred. No. 4.4e-121;
0; Mismatches 26;
Plate: 5 row: F column: 16
Seq primer: ATTTAGGTGACACTATAG.
Location/Qualifiers
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GI:11600447

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BF515180.1
                                      human.
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ORGANISM
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UI-H-BW1-anl-b-10-0-UI.S1 NCI_CGAP_Sub7 Homo sapiens cDNA clone
BF515180
                                                                                                                                                                                                                                                                                           /note="Organ: Drain; Vector: pCMVSPORT 6; 1st strand cDNA was primed with a NotI-oligo(dT) primer. Five prime end enriched, double-stranded cDNA was digested with Not I and cloned into the Not I and Eco RV sites of the pCMVSPORT 6 vector. Library was normalized. Library was constructed by Life Technologies. Contect: Feng Liang Life Prechnologies. Contect: Feng Liang Life Drive Rockville, Maryland 20850, USA Fax: (1) 301 610 8371 Email: fliang@lifetech.com URL: 1414ng@lifetech.com URL: 1414ng@lifetech.com URL: 1414ng@lifetech.com URL: 1514ng@lifetech.com URL: 150 chers
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                                                                         Genoscope - Centre National de Sequencage
BP 191 91006 EVRY cedex - France
Email: seqref@enoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5;
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   Li,W.B., Gruber,C., Jessee,J. and Polayes,D. Full-length cDNA libraries and normalization Unpublished (2001)
                                                                                                                                                                                                                                                                /tissue_type="neuroblastoma cells"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tch 54.8%; Score 437.2; DB 9; al Similarity 97.2%; Pred. No. 2.7e-116; 459; Conservative 6; Mismatches 5;
                                                                                                                                                                                                                        /clone_lib="LTI_NFL001_NBC4"
/sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CSODD008YH17"
                                                         Contact: Genoscope
                                                                                                                                                  1. .888
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-rémail.nih.gov
The sequence contained an oligo-dT track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. cDNA Library preparation: M. B. Soares Lab Clone distribution: NCI-CGAP clone distribution information can be found through the
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 451)
                                               NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
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                                                                                                                                                                                                 I.M.A.G.E. Consortium/LLNL at:
www.bio.llnl.gov/bbrp/image/image.html
Seq primer: Ml3 Forward
POLYA-Yes.
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129 c 1
                                                                             Tumor Gene Index
Unpublished (1997)
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Homo sapiens
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99t9c9gcggcgggtgtgtggcaacattacttcatgatgcagccatgaacctgcggaagtg 282
223
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QQ	17	17 GGTGCGGCCGGGTGTGTGTGTTTCTTCATGATGCAGCCATGAACCCTGCGGGAAGTG 76	· vo
ΟŸ	283	283 gtcaagcagaggatgcagatgtacaactcaccataccaccgggtgacagactgtgtacgg 342	42
qq	77	77 GTCAAGCAGAGGATGCAGATGTACAACTCACCATACCACGGGTGACACACTGTGTACGG 136	36
Οy	343	343 gcagtgtggcaaaatgaaggggccggggccttttaccgcagctacaccacccagctgacc 402	02
Dp	137	137 GCAGTGTGGGAAAATGAAGGGCCGGGGCCTTTTACCGCAGCTACACACCACCAGCTGACC 196	96
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qq	197	197 ATGAACGTTCCTTTCCAAGCCATTCACTTCATCACCTATGAATTCCTGCAGGAGCACTTT 256	99

<sup>523</sup> Oy Oy Oy

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<sup>643</sup> acggtatatcaagta 657 οy

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AC099368 Rattus no
AF361699 Mus muscu
AC108878 Mus muscu
AX306258 Sequence
AF216674 Homo sapi
                                                                  Aj303078 Homo sapi
AL353719 Human DNA
AC056351 Rattus no
AF288621 Mus muscu
AF223466 Homo sapi
AC099368 Rattus no
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266521 Caenorhabdi
AY06026 Drosophil
U4597 Onchocerca
U4599 Onchocerca
04599 Onchocerca
AC067971 Sequence
AP003615 Oryza sat
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AC003916 Rattus no
AC087150 Mus muscu
AF12531 Homo sapi
AL154572 Leishmani
AF121142 Gracilari
21889 T aestivum
AC093659 Homo sapi
AC027522 Homo sapi
AC027522 Homo sapi
AC027515 Homo sapi
AC037517029 Bos tattus no
AF120393 Rattus no
AF22315 Homo sapi
AC039356 Rattus no
AF429315 Arabidops
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AY032628 Homo sapi
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1322)
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AL357033 Human DNA
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Patent: WO 0078953-A 76 28-DEC-2000;
Incyte Genomics, Inc. (US)
Location/Qualifiers
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/organism="Homo sapiens"
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AF327402.1 GI:13926046
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Submitsion
Submitted (08-DEC-2000) Human Molecular Genetics, National Public Health Institute, Mennerhelmintie 166, Helsinki 00300, Finland
Location/Qualifiers
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B.,
Schweyen,R., Larsson,C. and Suomalainen,A.
Characterization of a novel human putative mitochondrial
transporter homologous to the yeast mitochondrial RNA splicing
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/organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="10"
/map="10q24"
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Eutheria, Primates, Catarrhini, Hominidae, Homo
EGAGAFYRSYTTOLTMNVPFQAIHFMTYEFLOEHFNPORRYNPSSHVLSGACAGAVAA
AATTPLDVCKTLLNTOESLALMSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIY
OLDSTALTAMSVYEFKYTITKRGEBRAGK"
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                 agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg 240
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Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
FEBS Lett. 494:79-84(2001).
                                                                                                                                                                                                                                                                                                                                        sapiens mRNA for mitochondrial RNA splicing protein 3/4 (HMRS3/4
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100.0%; Pred. No. 6.6e-83;
ive 0; Mismatches 0;
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26-APR-2001 (Rel. 67, Last updated, Version 2)
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67

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/protein_id="AAK49520.1"
/db_xref="G1:13926050"
/translation="MNPAEVVKQRMQMYNSPYHRVTDCVRAVWQNEGAGAFYRSYTTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LTMNVPFQAIHFMTYEFLQEHFNPQRRYNPSSHVLSGACAGAVAAAATTPLDVCKTLL
NTQESLALNSHITGHTTGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAMSVYE
FFKYLITKRQEBMRAGK<sup>H</sup>
508 C 544 g 433 t
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Li.F., Nikali, K., Gregan, J., Leibiger, I., Leibiger, B., Schweyen, R., Larsson, C. and Suomalainen, A.
Direct Submission
Submitted (08-DEC-2000) Human Molecular Genetics, National Public Health Institute, Mennerheimintie 166, Helsinki 00300, Finland
                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens putative mitochondrial solute carrier splice variant mRNA, complete cds, alternatively spliced, nuclear gene for antichondrial product.
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alternatively spliced"
/codon_start=1
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Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R., Larsson,C. and Suomalainen,A. Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing
                                                                                                                                                                                                                                      128 ggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattgagtgatg 187
                                                                                                                                                                                                    129 GGCCTGCCCACGCCCTTTATTTTGCCTGCTACGAAAAGTTAAAAAAAGACATTGAGTGATG 188
                                        9 GTCTACAGCCCTGACCCAGCTGCCCGCTATCGCATGTGTTGGAGGCCCTCTGGAGGATTA
                                                                                           taagaacggaggcctatggaggcccatgaggggctgaacgtcacagcaacagcgcgag
                    gtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggaggatta
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/organism="Homo sapiens"
/db_xref="taxon:9606"
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AFYRSYTTOLTMNVPFQA HHMY YELLOBHENDORR VNB SHVL GGACAGAAVAATT
LDVCKTLLNTQESLALNSHITGH I TGMASAFRIVYQVGGVTAY FRGVQARVIYQI PSTA
                                                                                     /translation="MELEGRCAGGVAGGPAAGPGRSPGESALLDGWLQRGVGRGAGGGE
AGACRPPVRQDPDSGPDYEALPAGATVTTHMVAGAVAGILEHCVMYPIDCVKTRMQSLQ
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Milliams, L. T., Escobedo, J., Innis, M.A., Garcia, P.D., Klinger, J., Kassam, A., Reinhard, C., Randazzo, F., Kennedy, G.C., Pot, D., Lamson, G., Drmanac, R., Crkenjakov, R., Drmanac, S., Dickson, M., Labat, I., Leshkowitiz, D., Kita, D., Garcia, V. and Strache-Crain, B. Human genes and gene expression products
Patent: WO 0102568-A 1912 11-JAN-2001; CHIRON CORPORATION (US); HYSEQ, INC. (US)
                                                                                                                                                                                                                                                                                                                                                                                      121 ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
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                              /product="mitochondrial RNA splicing protein 3/4"
/function="putative mitochondrial solute carrier"
/protein_id="CAC27996.1"
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ive 0; Mismatches 0; Indels
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/db_xref="taxon:9606"
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104 c 120
                 /gene="HMRS3/4"
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Matches 273; Conservative
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/function="putative mitochondrial solute carrier"
/protein_id="CAC27997.1"
/protein_id="MNPAPVKQRWQMYNSPYHRVTDCVRAVWQNEGAGAFYRSYTTQL
TMNVPFQAIHFMYFELQEHENDGRRYNPSSHVLSGAGAAAAATTPLDVCKTLLNT
QESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYEFFK
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Butheria; Primates; Catarrhini; Hominidae; Homo.
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                                                                                                                                                                                                                                 Larsson C., Suomalainen A.;
Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter
homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
FEBS Lett. 494:79-84(2001).
                                                                                                                                                                  ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
                                                                                                   306 ATGCAGAGTCTACAGCCTGACCCAGCTGCCGGTATCGCAATGTTGGAGGCCCTCTGG 365
                                                                                                                                           61 aggattataagaacggaggcctatggaggcccatgagggggttgaacgtcacagcaaca 120
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                       Gaps
                                                             1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                       Indels
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                                                                                                                                                                                                                                                                                                            181 agtgatgtaatccaccctgggggcaatagccatattgccaatggt 225
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    Pred. No. 2.2e-64;
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26-APR-2001 (Rel. 67, Last updated, Version 2)
                       Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                         standard; RNA; HUM; 1889
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/gene="HMRS3/4"
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100.08;
                     Matches 225; Conservative
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    Best Local Similarity
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HSA303078
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variation annotation and not be found, in the sequence summission only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all regions were either double-stranded or sequenced with an alternate chemistry or covered by high quality data (i.e., phred quality >= 30); an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by at least one plasmid subclone or more than one MI3 subclone; and the assembly was confirmed by restriction digest. The following abbreviations are used to associate primary accession numbers given in the feature table with their source databases: Em:, EMBL; Sw:, SWISSPROT; Tr:, TREMBL; Wp:, WORMPEP; Information on the WORMPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                http://www.sanger.ac.uk/HGP/Chr10
RP11-85A1 is from the library RPCI-11.1 constructed by the group of
Pieter de Jong. For further details see
http://www.chori.org/bacpac/home.htm
                                   ö
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Human DNA sequence from clone RP11-85A1 on chromosome 10, complete
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The true left end of clone RP11-85A1 is at 1 in this sequence. The true left end of clone RP11-483F11 is at 123061 in this sequence. The true right end of clone RP11-129J12 is at 51589 in this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ramsay, H.

Direct Submission
Submitted (25-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire,
CBIO 1SA, UK. E-mall enquiries: humquery@sanger.ac.uk Clone
requests: clonerequest@sanger.ac.uk
On Sep 26, 2001 this sequence version replaced gi:14280413.
During sequence assembly data is compared from overlapping clones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Where differences are found these are annotated as variations together with a note of the overlapping clone name. Note that the variation annotation may not be found in the sequence submission
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                                       Indels
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Pred. No. 2.2e-64;
                                   Mismatches
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Mammalia; Eutheria; Primates;
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Unpublished
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122665
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JOURNAL
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Rattus norvegicus chromosome Rfl clone CH230-24M6, WORKING DRAFT
SEQUENCE, 33 unordered pieces.
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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                                                                                                                                         /clone="RPI1-85A1"
/clone_lib="RPCI-11.1"
/clone_lib="RPCI-11.1"
/complement(7066. .7118)
/note="Single clone region. Sequence from reads from a short insert library derived from a single pUC clone.
Restriction digest data confirm the assembly."
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100.0%; Pred. No. 4.2e-64;
iive 0; Mismatches 0; Indels
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                                                   /organism="Homo sapiens"
                                                                                     /db_xref="taxon:9606"
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   Location/Qualifiers
                                                                                                                      /chromosome="10
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Matches 225; Conservative
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Best Local 3
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KEYWORDS
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FEATURES
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Loulseged, H., Lozado, R.J., Lu, X., Lucier, A., Lucier, R., Luna, R., Mal, Mahari, M., Martin, R., Martindale, A., Martine, Mortine, S., Moser, M., Nichell, T., Mohabat, K., Muygan, M., Niguyen, J., Newtson, J., Newtson, N., Niguyen, J., Newtson, N., Niguyen, M., Niguyen, P., Pace, A., Payton, B., Peery, J., Perez, L., Pickens, R., Primus, E., Pu, L.L., Quilses, M., Ren, Y., Rives, M., Rojas, A., Rolle, M., Ruiz, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shooshtari, N., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tamerisa, K., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Walling, C., Malliams, G., Walliams, A., Waerren, R., Washington, C., Worley, K., Wu, C., Wu, Y., Wu, Y. F., Zhou, J., Zorrilla, S., Nelson, D., Weinstock, G., and Gibbs, R.
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NOTE: This is a 'working draft' sequence. It currently consists of 33 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, Tx 77030, USA on Dec 20, 2001 this sequence version replaced gi:15627972.
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of 6947 bp in length
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Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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Worley, K.C.
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/translation="Meirregvengaagrrmdgdcrdgcgskdagsedyenlptsas
ythatagaaagilehsimyevdsyktrmosinpdraartstyralkrimttegfwr
Plrginvmmagapahamyerteytenwrrtlndyeshgcnshlangvagsmatilhdav
mnpaevkorlomyrschenyertestremyrfesigaryrsyttoltmnipfosihfity
yefloeqvnprrdyndgynschiisgglagarschenys
                                                                           4112 bp mRNA linear ROD 27-OCT-2001 mitochondrial solute carrier-like protein mRNA,
                                                                                                                                                                           Li.Q.-Z., Ruan,Q.-G., Eckenrode,S., Shi,J.-D., Cruz,P., Wang,C.-Y. and She,J.-X.
A new gene which is highly expressed in NOD mice spleen Unpublished
                                                                                                                                                                                                                                                              Mang.C.-Y.
Direct Submission
Submitted (20-JUL-2000) Pathology, University of Florida, 1600 SW
Archer Road, Rm. D6-15, Gainesville, FL 32610, USA
Location/Qualifiers
                                                                                                                                                         Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                         /product="mitochondrial solute carrier-like protein"
/protein_id="AAL23859.1"
/db_xref="GI:16506178"
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1. 4112
/organism="Mus musculus"
/db_xref="taxon:10090"
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GRLSGMANAFRTVYQLNGLPATSKASRRVSSTRCPPPPFLGLSMSSSSTFSPSASWKI
ELHTKGRDHRIFS"
                                    PRI 17-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MELRSGSVGSQAVARRMDGDSRDGGGGKDATGSEDYENLPTSAS
YSTHWARGAMAGILBHSVWPYDDVKTRWDGSLESPPRAQYTSYTGALKINFTEGFWR
PLRGVNWMINGAGPHAMYERCYENNKRTLNDVFHHGGNSHLANGIAGSMATLLHDAW
MNPAEVVKQRLQMYNSQHRSAISCIRTVWRTEGLGAFYRSYTTQLTMNIFPQSIHFIT
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 1429)
                                                                                                                                                                                                                                                                                            Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z. Direct Submission State (12-JAN-2000) Chinese National Human Genome Center at Shanghai, 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201203, China Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    261 ATGCAGAGTTTGAGTCCCAGATCCCCAGTACCACAAGTATCTACGGAGCCCTCAAG 320
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                         nr.22390b 1429 bp mRNA linear PR:
Homo sapiens HT015 protein (HT015) mRNA, complete cds.
AF223466
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                                                                                                                                                                                                                       Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z.
A novel gene expressed in human hypothalamus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44.9%; Score 128; DB 9; Length 14 66.1%; Pred. No. 9e-32; ive 0; Mismatches 95; Indels
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/protein_id="AAF64141.1"
/db_xref="G1:7578783"
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/db_xref="taxon:9606"
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RESULT 1 AC099368

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R Alshrooks S.L. Amaratunge H.C. Ared. R., Banks T. Barbaria, J., Banksy, D. M., Adams, C., Amaratunge, H.C. Ared. R., Banks, T. Barbaria, J., Benton, J. S. Bimage, K. Blankenburg, K. Bonnin, D., Bouck, J., Benton, J. S. Bimage, K. Blankenburg, K. Bonnin, D., Bouck, J., Benton, J. Burch, P. Burkett, C., Burcherl, K.L. Bytd, N.C., Carron, T.F. (arter, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, T., Dathbury, J. Christopoulos, C., Cleveland, C. D. Cox, C. Coyle, M. D., Dathbury, J. Christopoulos, C., Cleveland, C. D. Cox, C. Coyle, M. D., Dathbury, J. Christopoulos, C., Cleveland, C. D. Cox, C. Coyle, M. D., Dathbury, J. Christopoulos, C., Cleveland, C. D. Cox, C. Coyle, M. D., Dathbury, J. Christopoulos, C., Eddar, D., Datyper, H., Dugan-Rocha, S., Durbh, H.H., Douchwaite, K.J., Draper, H., Dugan-Rocha, S., Durbh, H.H., Douchwaite, K.J., Edwards, C., Earnhart, C., Eddar, D., Edgar, D., Edgar, C., Boctlon, K.J., Earnhart, C., Eddar, D., Edgar, M., Followay, C., Garza, N., Gill, R., Gorli, J. H., Guevara, M., Gunaratne, P., Hale, S., Harrishon, K., Harrisho, H., Harrisho, M., Luk, Y., Luk, Y., Lolivet, S., Joudah, S., Karlson, E., Harrishon, R., Harrishon, E., Martin, R., Martin, M., Nawaon, M., Morris, S., Massey, E., Mawhiney, E., McChens, R., Luk, J., Massey, E., Mawhiney, E., McChens, R., Pallind, M., Nawaon, M., Morris, S., Mayer, N., Wallers, M., Pallishon, J., Newshw, M., Okudon, G., Corguny, N., Oviedo, R., Panerisa, M., Ren, Y., Wuych, N., Oviedo, R., Panerisa, M., Tansey, J., Taylor, T., Sparks, A., Panerisa, M., Tansey, J., Taylor, T., Taper, R., Wuych, Wall, R., Wuych, Wall, R., Wuych, Wall, R., Wuych, Wall, Wall, R., Wuych, Wall, R., Wuych, Well, R., Pallinghon, M.,
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RATTUS NOTVEGICUS CLONE CH230-84G11, *** SEQUENCING IN PROGRESS
A***, 71 unordered pieces.
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Submitted (10-NOV-2001) Human Genome Sequencing Center, Department
of Molecular and Human Genetics, Baylor College of Medicine, One
Baylor Plaza, Houston, TX 77030, USA
On Dec 20, 2001 this sequence version replaced gi:16901901.
                                                                                                                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Euteleostomi;
Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Assembly program: Phrap; version 0.990329First call to
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Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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Center clone name: CH230-84G11
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Mammalia; Eutheria;
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Rattus norvegicus
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                                      NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a "working draft' sequence. It currently consists of 71 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
      Estimated insert size: 120308; sum-of-contigs estimation Quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 1.9x in Q20 bases; sum-of-contigs estimation
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RESULT

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ACI08878 191702 bp DNA linear HTG 06-FEB-2002 Mus musculus clone RP23-256H24 strain C57BL6/J, *** SEQUENCING IN PROGRESS ***, 17 unordered pieces.
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                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 191702) Grills, G., Li, L., Montgomery, K. T., Brown, M.A., Chiu, D., Decker, J., Fusina, M., Haider, A., Keller, A., Perera, A., Shim, C., Thomas, E., High Throughput Mouse Sequencing Kucherlapati, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (01-FEB-2002) Harvard Partners Center for Genetics and Genomics, Harvard Medical School, 65 Landsdowne St, Cambridge, MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Quality coverage: agarose-FP - N/A Quality coverage: 5.6 x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                    2 (bases I to 191702)
Grills,G., Li,L., Montgomery,K.T., Brown,W.A., Chiu,D., Decker,J.
Grills,G., Li,L., Keller,A., Perera,A., Shim,C., Thomas,E.,
Zencheck,M., Xi,C., Juels,P. and Kucherlapati,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * NOTE: This is a 'working draft' sequence. It currently consists of 17 consigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as truns of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               On Feb 6, 2002 this sequence version replaced gi:18464039.
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Sequencing vector: puC18; L08752
Chemistry: Dye-terminator Big Dye; 1008
*Consensus quality: 187211 at least Q20
*Consensus quality: 18727 at least Q30
*Consensus quality: 183181 at least Q40
Estimated insert size: agarose-FP - N/A
**Estimated insert size: 191382 - sum-of-contigs
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Center Code: HPGC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Web site:
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                           DEFINITION
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                      SOURCE
                                                                                                           AF361699 5869 bp mRNA linear ROD 07-NOV-2001 Mus musculus mitochondrial carrier-like protein mRNA, complete cds; nuclear gene for mitochondrial product.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /translation="MELREGGYGNQAAGRRWDGDCRDGGCGSKDAGSEDYENLPTSAS
VSTHWTAGAWAGILEHSIMYPVDSVKTRWQSLNPDPKARYTSIYGALKRIMHTEGFWR
PLRGLNVWMWGAGPAHAMYFACYENWKRTLNDVFSHQGNSHLANGILKAFVWSWEALL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 5869)
Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A. and
                                                                                                                                                                                                                                                                                                                                                                                                  carrier protein gene is up-regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (15-WAR-2001) Department of Pathology, Immunology and Laboratory Sciences, University of Florida, 1600 SW Archer Road, Room D6-15, Gainesville, FL 32610, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 (bases 1 to 5869)
Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    332 ATGCAGAGTTTGAATCCAGATCCCAAAGCCCGGTATACAAGCATCTATGGCGCCCTCAAG 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /codon_start=1
/evidence=not_experimental
/product="mitochondrial carrier-like protein"
/protein_id="AAL27990.1"
/db_xref="G1:16755528"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
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/map="between D14Mit124 and D14Mit236"
Db 13898 GATGTAATCCACCCGGGGCCAATAGCCATATGCCAATGGT 13939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 agigatgiaatccaccetggggggcaatagccatattgccaatggt
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Pred. No. 1.5e-25;
0; Mismatches 72;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGASSPGPSNLHPRQTENSRVT"
1427 c 1390 g 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                           She,J.
A novel mouse mitochondrial of from young to adult NOD mice Unpublished
                                                                                                                                                                                               AF361699.1 GI:16755527
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68.0%;
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/note="MCLP"
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Best Local Similarity 68.0
Matches 153; Conservative
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AC108878
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AF2106/4 108765 bp DNA linear HTG 02-JUN-2001
Homo sapiens chromosome 8 clone RP1-158P13 map 8p, WORKING DRAFT
SEQUENCE, 16 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 10876)
Schilhabel.M.B., Baumgart,C., Blechschmidt,K., Dette,M., Jahn,N., Lehmann,R., Menzel,U., Polley,A., Reichwald,K., Schudy,A., Soddyqui,R., Taudien,S., Wen,G., Schlegelberger,B., Siebert,R., Chromosome 8 genomic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2. (bases 1 to 108765)
9. (bases 1 to 108765)
Molley, A., Wen, G., Baumgart, C., Dette, M., Jahn, N., Schilhabel, M., Men, C., Wen, G., Baumgart, C., Dette, M., Jahn, N., Schilhabel, M., Direct Submission
Direct Submission
Biotechnology, Beutenbergstrasse 11, Jena 07745, Germany on Jun 2, 2001 this sequence version replaced 91:8151796.
Center: Insitute of Molecular Biotechnology
Center code: IMB
15 GTTAAAAAAAGACATTGAGTGACGTAATCCACCCCAGGGGCAATAGCCATATTGCCAATGG 74
                                                          * consists of 16 counting utall sequence. It currently consists of 16 counting. The true order of the pieces arbitrary. Gaps between the contigs are represented as * runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence * as soon as it is available and the accession number will * be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center clone name: RP1-158P13
Sequencing vector: M13; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.990329
Consensus quality: 87772 bases at least Q40
Consensus quality: 95159 bases at least Q30
Consensus quality: 100612 bases at least Q30
Quality coverage: 3,95 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              * NOTE: This is a 'working draft' sequence. It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1101: contig of 1101 bp in length
1201: gap of unknown length
21239: contig of 19938 bp in length
21239: gap of unknown length
36201: contig of 14962 bp in length
36301: gap of unknown length
47101: contig of 10800 bp in length
47201: gap of unknown length
56806: contig of 9605 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    f unknown length
g of 8177 bp in length
t unknown length
of 8338 bp in length
unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Web site: http://genome.imb-jena.de/
Contact: gscj-submit@genome.imb-jena.de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center project name: H241
                                                                                                                                                                                                                                                                                                                   HTG; HTGS_PHASE1; HTGS_DRAFT.
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47101:
47201:
56806:
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65083:
65183:
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73621:
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36202
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47102
47202
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 106283 ATGCAGAGTTTGAATCCAGATCCCAAAGCCCGGTATACAAGCATCTATGGCGCCCTCAAG 106342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 106343 AGGATCATGCACACTGAAGGCTTCTGGAGGCCCCTGCGGGGCCTGAACGTGATGATGATG 106402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db 106403 GGTGCAGGGCCCGCGCACGCCATGTATTTTGCCTGCTATGAAAACATGAAAAGGACTTTA 106462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaaagacattg 180
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                                                                                                                                                                                                                                                                                                                                                                                                        360 others
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190668: gap of unknown length
191702: contig of 1034 bp in length.
                                                                                                                                                                                                                                in length.
                                                            in length
                                                                                                      bp in length
                                                                                                                                               bp in length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      I (sites)
Ishikawa,K., Asai,S., Takahashi,Y., Nagata,T.
Ishikawa,K., Asai,S., Takahashi,Y., Nagata,T.
Method for examining ischemic conditions
Patent: WO 0188188-A 1009 22-NOV-2001;
School Juridical Person Nihon University (JP)
                                       length
                                                                                  length
                                                                                                                         length
                                                                                                                                                                     length
  length
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68.0%; Pred. No. 2.6e-25;
iive 0; Mismatches 72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 105.2; DB 6;
Pred. No. 3.5e-24;
0; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA
                                                                            186413: gap of unknown I
188416: contig of 2003 by
188436: app of unknown I
189584: contig of 1148 by
189504: gap of unknown Ie
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unknown
of 1367
                                         unknown
of 2398 l
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AX306258
AX306258.1 GI:17645513
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/db_xref="taxon:10090"
139 c 121 q 96
                                                                                                                                                                                                                                                                                             /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:10090"
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                     contig
gap of contig
contig
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  gap of
                                                                                                                                                                                                                                                                                                                     /strain="C57BL6/J"
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Best Local Similarity 93.2%;
Matches 110; Conservative
                                                          186393:
                                                                                                                                                                                                                                                                                                                                                                                  sex="male"
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153; Conservative
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189605
190649
                                                        183996
186394
186414
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                                         83976
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Best Local

Matches

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BASE COUNT

ORIGIN

source

FEATURES

165 gttaaaaaagacattgagtgatgtaatccaccctgggggcaatagccatattgccaatgg 224

source

FEATURES

BASE COUNT ORIGIN

DEFINITION

RESULT 1

ACCESSION VERSION

KEYWORDS

ORGANISM

REFERENCE AUTHORS JOURNAL

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1500 others
                                                                               bp in length
                                                                                         known length
2142 bp in length
                                                                                                             gap of unknown length
contig of 1441 bp in length
gap of unknown length
bp in length
                                                                                                                                                                                                                                         /clone="RP1-158P13"
25034 c 24818 g 28459 t
                                                                                                                                              101563: contig of 3246
101663: gap of unknown
108765: contig of 7102
                                                                                         unknown
                                                                                                                                                                                      1. .108765
/organism="Homo sapiens"
/db_xref="taxon:9606"
/chronosome="8"
/map="8p"
                                                                                                                                                                               location/Qualifiers
                 81424
86504
86604
89474
89574
92370
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SOURCE
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Gaps Query Match

36.8%; Score 105; DB 2; Length 108765;
Best Local Similarity 66.7%; Pred. No. 9.8e-24;
Matches 150; Conservative 0; Mismatches 75; Indels 0;

q δλ

ag δ

181 agtgatgtaatccacctgggggcaatagccatattgccaatggt 225 ò

Search completed: September 28, 2002, 07:58:26 Job time: 14827 sec

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September 28, 2002, 08:06:20; Search time 664.31 Seconds (without alignments) 736.585 Million cell updates/sec
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Compugen Ltd.
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GenCore version
Copyright (c) 1993 - 2000
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

			Description		Halling II ONE 330	Human polynucleoti	Human transport pr	Human uncoupling p	Novel human polynu	Human polynucleoti	Human secreted pro	Human immune/haema	Human immune/haema
SUMMAKIES	osp.		ID		CFOF / 2077	AA160661	AAF27733	AAC90457	AAF66156	AA158875	AAS03906	AAK69779	AAK73320
			DB	21	1	22	22	21	22	22	22	22	22
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W Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
W vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
w unincerary; antipsoriatic; antiarthritic; immunosuppressant; cardiant;
w munostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
w hypotensive; dermatological; immunosuppressive; antiinflammatory;
w antiviral; antibacterial; antifungal; antitheumatic; antithyroid;
antiviral; active disorder; osteoarthritis; graft vs host disease;
w cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
wholesterol ester storage; systemic lupus erythematosus; infection;
severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
w allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
bone damage; cartilage damage; antiinflammatory disease; coagulation;
w thrombosis; contraceptive; ss. Human ORFX ORF398 polynucleotide sequence SEQ ID NO:795. 08-FEB-2001 (first entry) 

AAC74843 standard; cDNA; 1418 BP.

AAC74843

AAC74843;

Homo sapiens.

WO200058473-A2.

05-OCT-2000

31-MAR-2000; 2000WO-US08621.

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(first entry)

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22-OCT-2001
AAI60661;
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                                                                                                                                                                                                                                                                                                                                                                               which represent the human ORRY open reading frames 1 to 3161. The ORRY sequences have activities such as: cytostatic; hepatotropic; vulnerary; sequences have activities such as: cytostatic; hepatotropic; vulnerary; osteopathic; antiparkinsonian; nootropic; neuroprotective; osteopathic; antiparkinsonian; nootropic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidabetic; hypotenaive; dermatological; immunosuppressive; antidabetic; hypotenaive; dermatological; immunosuppressive; antilinflammatory; antibacterial; antivital; antifungal; antitrheumatic; antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORRY-associated disorder. The nucleic acids can be used to express ORRY proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, and its providers of the protein and providers of the provi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupus erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance
                                                                                                                                                                                                                                                                                                                                                                   AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397
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                                                                                                                                                                                                                                                Novel nucleic acids and peptides derived from open reading frame X, useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            coagulation; to inhibit thrombosis; and as a contraceptive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1418 BP; 353 A; 400 C; 368 G; 297 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 285; DB 21; 100.0%; Pred. No. 9.3e-87;
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                                                                                                                                                                                                                                                                                                                          Claim 5; Page 853-854; 5507pp; English.
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                                      99US-0127636.
99US-0127728.
                    99US-0127607
                                                                        2000US-0540763
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                                                                                                                                                     Leach M;
                                                                                                                 (CURA-) CURAGEN CORP.
                                                                                                                                                                                       WPI; 2000-602362/57.
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                                                                                                                                                                                                             P-PSDB; AAB40634
                                                                                                                                                   Shimkets RA,
                                      02-APR-1999;
05-APR-1999;
                                                                        30-MAR-2000;
                    31-MAR-1999;
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AAI60661 standard; cDNA; 1294 BP

RESULT 2 AAI60661/C ID AAI606 XX

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The invention relates to human nucleic acids (AAIS7798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  assays for receptor activity, arthritis and inflammation, leukaemias and C.N.S disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequence data for this patent did not form part of the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wang D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nootropic; immunosuppressant; cytostatic; gene therapy; cancer;
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                                                                             peripheral nervous system; neuropathy; central nervous system; CNS; Alzhehmer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel nucleic acids and polypeptides, useful for treating disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhang J;
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Yang Y,
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Xu C, Xue AJ,
l, Drmanac RT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    such as central nervous system injuries
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Human polynucleotide SEQ ID NO 4650.
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Wehrman T, Xu
Goodrich R,
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2000US-0552317.
2000US-0598042.
2000US-0620312.
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2000US-0662191.
2000US-0693036.
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Matches 280; Conservative
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Wang 2,
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                                                                                                                                                                                                                                                                                                   WO200153312-A1
                                                                                                                                                                                               Leukaemia; ss
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                                                                                                                                                                                                                                                   Homo sapiens.
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09-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19-JUL-2000;
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us-09-870-113-9.rng

aggattataagaacggagggcctatggaggcccatgaggggggctgaacgtcacagcaaca

61

90 OY OY OY

425

241

306 181 366

121

ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaaagacattg

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proliferative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention provides the protein and coding sequences for 43 novel human transport proteins (designated TPPTs). These can be used in the diagnosis and treatment of transport, metabolic, neurological, reproductive, cardiovascular and immune disorders, and cell proliferativ
                                                                                                                                                                                                                                                                                                                               Human; transport protein; TPPT; transport disorder; metabolic disorder;
neurological disorder; cardiovascular disorder; reproductive disorder;
immune disorder; cancer; ss.
1074 AGGATTATAAGAAGGGGCCTATGGAGGCCCATGAGGGGGTGAACGTCACAGCAACA 1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isolated polypeptide with a human transport protein sequence is useful for the diagnosis, prevention and treatment of disorders associated with the immune, reproductive and cardiovascular systems -
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                                                                                                   agtgatgtaatccacctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
                                       ggcgcagggcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg
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Patterson
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                                                                                                                                        gcaacattacttcatgatgcagccatgaaccctgcggaag 280
                                                                                                                                                   Human transport protein TPPT-33 coding sequence
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Lu DAM, Au-Young J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 5; Page 160; 165pp; English
                                                                                                                                                                                                                           AAF27733 standard; cDNA; 1322
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99US-0149357.
99US-0162287.
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                                                                                                                                                                                                                                                                              (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Yang J, Yue H,
MR, Azimzai Y,
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                                                                                                                                                                                                                                                                                                                                                                                                         WO200078953-A2.
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18-AUG-1999;
28-OCT-1999;
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Human; uncoupling protein; immunosuppressive; antiarthritic;
antirheumatic; antiprolliferative; cardiant; vasotropic;
cerebroprotective; neuroprotective, antibacterial; opthalmological;
gastrointestinal; nephrotropic; gynaecological; vulnerary; thrombolytic;
gene therapy; cancer; wound; infectious disease; thrombosis; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is one of eighteen isolated nucleotide sequences encoding uncoupling proteins. The nucleotide sequences may be used for the detection of various disorders such as cancer, for chromosome identification, as chromosome markers and for numerous other diagnostic or research purposes. The uncoupling protein encoded by the nucleotide sequences may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders, wounds, infectious diseases, thrombosis, arthritis, and infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Uncoupling proteins and nucleic acid sequences encoding them, usefu for detecting, preventing and treating proliferative, neurological, immune system, cardiovascular and gastrointestinal disorders -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 306-307; 343pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ruben SM, Ni J, Komatsoulis G,
                                BP.
                                                                                                                              Human uncoupling protein cDNA #6.
                              AAC90457 standard; cDNA; 1336
                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0142821.
99US-0149448.
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                                                                                            (first entry)
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                                                                                                                                                                                                                                           infertility; ss
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                                                                                                                                                                                                                                                                             Homo sapiens
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                                                            AAC90457;
             AAC90457
RESULT
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Gaps

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Indels

Length 1322;

Score 280; DB 22; Pred. No. 4.6e-85;

98.2%; Scur 100.0%; Pre 0; '

Matches 280; Conservative

Local Similarity

Best

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Query Match

Mismatches

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antisense oligonucleotides can be generated. The
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Garcia PD, Klinger J, Kassam A;
                                                                                                                         180
                                                                                                                                                                          agtgatgtaatccaccctggggggaatagccatattgccaatggtgcggcgggtgtgtg 436
                            Gaps
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                                            aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca
                                                                                                                                 aggattataagaacggagggcctatggaggcccatgagggggggtgaacgtcacagcaaca
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or
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         Length 1336;
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                           Indels
                                                                                                                                                                                                   241 gcaacattacttcatgatgcagccatgaacctgcggaag 280
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4.6e-85;
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Kennedy GC, Pot D, La
Dickson M, Labat I,
LW, Strache-Crain B;
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                           Mismatches
        Score 280;
Pred. No.
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 98.2%; Sur-
100.0%; Pre-
0;
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99US-0142311.
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                                                                                                                                                                                                                                                                                                           (first entry)
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Reinhard C, Randazzo F,
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. Drmanac S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Crkenjakov R, Drmanac S,
Kita D, Garcia V, Jones
                           Conservative
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                 Similarity
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02-JUL-1999;
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                           280;
       Query Match
Best Local 9
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                           Matches
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polynucleotides and
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                                                                                                                                                                                                                                                                                                                                                           Gaps
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                their gene products are used as genetic or biochemical markers (e.g. blood or tissues) that will detect the earliest changes along the carchnogenesis pathway and/or monitor the efficacy of therapies preventive interventions. The polynucleotides, polypeptides and antibodies against them can be used in pharmaceutical compositions treat the cancers and proliferative disorders such as neoplasia, dysplasia and hyperplasia.
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                                                                                                                                                                                                                                                                                                   95.8%; Score 273; DB 22;
100.0%; Pred. No. 6.5e-83;
ive 0; Mismatches 0;
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2000US-0552317.
2000US-0598042.
2000US-0653450.
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                                                                                                                                                                                                                                                                                                     Query Match 95.8
Best Local Similarity 100.
Matches 273; Conservative
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19-JUL-2000;
03-AUG-2000;
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19-OCT-2000;
29-NOV-2000;
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Rosen CA;

99US-0155807

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(HUMA-) HUMAN GENOME SCI INC
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                                                WO200123598-A1
       Homo sapiens.
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                                                                                                                                                                                                                                                                        The invention relates to human nucleic acids (AAIS7798-AAI61369) and the encoded polypeptides (AAM36642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous system diseases, such as localised neuropathies and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the Activities such as: Immune system suppression, Activinhibhin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, ancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human secreted protein; autoimmune disorder; hyperproliferative disorder; cardiovascular disorder; angiogenesis; nervous system disorder; bacterial infection; viral infection; ss; fungal infection; coular disorder; wound healing; tissue regeneration; epithelial cell proliferation; skin ageing; chemotaxis; IGG Fc region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Note: The sequence data for this patent did not form part of the printed specification.
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                                                                                                                                                              Novel nucleic acids and polypeptides, useful for treating disorders
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                          Zhang J;
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    Ren F,
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  Oian XB,
Yang Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1316 BP; 335 A; 364 C; 337 G; 280 T; 0 other;
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  Ma Y, (
Xue AJ,
                                             Drmanac RT;
                                                                                                                                                                                                                            Claim 1; SEQ ID NO 1078; 10078pp; English.
                                                                                                                                                                                      such as central nervous system injuries
Asundi V, Chen R,
Wehrman T, Xu C,
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                                             Goodrich R,
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Best Local Similarity 98.2
Matches 275; Conservative
                                                                                        WPI; 2001-442253/47.
                                             Zhou P,
Liu C,
Wang Z,
                                                                                                                   P-PSDB; AAM39719
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Tang YT,
Wang J, W
Zhao QA,
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  SO X X C C C C C C C C C X D X X D D X X D D D X X D D X X D D X X D D X X D D X X D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X X D D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D D X D
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Sequences AASO3873-AASO3922 represent isolated nucleic acid molecules and pcR primers of the invention. acid of the invention. Secreted proteins and their related nucleic acids can be used in the diagnosis of or susceptibility to a pathological condition by determining the presence or absence of a mutation in a nucleic acid or the presence or amount of a secreted protein. The sequences are used to prevent, treat or ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The antibodies to the polypeptides can also be used in alleviating symptoms associated with disorders and in diagnostic immunoassays e.g. radioinmunoassays or enzyme linked immunosorbent assays (ELISA). The disorders include autoimmune diseases e.g. rheumatoid arthritis, hyperproliferative disorders e.g. neoplasms of the breast or liver, cardiovascular disorders e.g. carebrais carrest, cerebrovascular disorders e.g. cerebrai ischaemia, angiogenesis, nervous system disorders e.g. Alzaharimer's disease, infections caused by meteria, viruses and fungiand ocular disorders e.g. corner in the contains a corner in the contains and coular disorders e.g. corner in the contains and coula
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Forty one nucleic acid molecules encoding human secreted proteins, useful the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases
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100.0%; Pred. No. 3.4e-66;
iive 0; Mismatches 0;
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Best Local Similarity 100.
Matches 225; Conservative
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2000US-0235484,
2000US-0235834,
2000US-0235836,
2000US-0236327,
                                                                                                           2000US-0236802.
2000US-0237037.
2000US-0237038.
2000US-0237039.
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2000US-0239935.
2000US-0239937.
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20000S-0244617
20000S-0246474
20000S-0246475
20000S-0246476
20000S-0246477
20000S-024677
20000S-0246523
20000S-0246523
20000S-0246525
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2000US-0246528.
2000US-0246532.
                                                 26-SEP-2000;
27-SEP-2000;
27-SEP-2000;
29-SEP-2000;
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01-NOV-2000
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                                Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
                     Human immune/haematopoietic antigen genomic sequence SEQ ID NO:24591
                                                                                                                                                                                                    2000US-0216880.
2000US-0217487.
2000US-0217496.
2000US-0218290.
                                                                                                   17-JAN-2001; 2001WO-US01354
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      (first entry)
                                                                      WO200157182-A2.
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26-JUL-2000;
14-AUG-2000;
14-AUG-2000;
                                                         Homo sapiens.
      06-NOV-2001
                                                                                     09-AUG-2001
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24 FEB - 2000; 2000US - 0186654

02-MAR - 2000; 2000US - 0186510.

17 MAR - 2000; 2000US - 018674.

18 APR - 2000; 2000US - 019974.

18 APR - 2000; 2000US - 0199123.

19 MAY - 2000; 2000US - 0205515.

07 JUN - 2000; 2000US - 0205515.

07 JUL - 2000; 2000US - 0214886.

30 JUN - 2000; 2000US - 0214886.

11 JUL - 2000; 2000US - 0216880.

11 JUL - 2000; 2000US - 0217487.

14 JUL - 2000; 2000US - 0220563.

26 JUL - 2000; 2000US - 0220563.

26 JUL - 2000; 2000US - 0220513.

14 AUG - 2000; 2000US - 0225514.

14 AUG - 2000; 2000US - 0225566.

14 AUG - 2000; 2000US - 0225567.

14 AUG - 2000; 2000US - 0225577.

14 AUG - 2000; 2000US - 0225757.

14 AUG - 2000; 2000US - 0225757.
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01-SEP-2000; 200005-0229343.
01-SEP-2000; 200005-0229344.
05-SEP-2000; 200005-0229345.
05-SEP-2000; 200005-0229505.
06-SEP-2000; 200005-0229513.
06-SEP-2000; 200005-0229513.
06-SEP-2000; 200005-0230437.
08-SEP-2000; 200005-0231243.
08-SEP-2000; 200005-0231244.
08-SEP-2000; 200005-0231244.
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18-AUG-2000; 2000US-022681
22-AUG-2000; 2000US-022681
22-AUG-2000; 2000US-0226868
22-AUG-2000; 2000US-022182
23-AUG-2000; 2000US-0227009
30-AUG-2000; 2000US-0228924
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                                                                            WO200157182-A2.
                                Homo sapiens.
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25-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                               AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I) amino acid sequences given in AAM8270 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome concernment the patients own production of (I). Additionally, (I) supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, (I) proteins and polynucleotides may be used to prevent, (I) additionally, (I) concern and ancer metastases of haematopoietic-derived cells. AAK64703 cancers and cancer metastases of haematopoietic antigen genomic sequences from the present invention. AAK84942 to AAK84950 and AAM82169.
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                                                                     2000us-0251990.
2000us-0254097.
2001us-0259678.
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                           2000US-0251869
2000US-0251989
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11-DEC-2000;
05-JAN-2001;
08-DEC-2000;
08-DEC-2000;
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27-56P-2000; 20000S-0235834.

29-56P-2000; 20000US-0235834.

29-56P-2000; 2000US-0235834.

29-56P-2000; 2000US-0235834.

29-56P-2000; 2000US-0235834.

29-56P-2000; 2000US-0235836.

R 20-0CT-2000; 2000US-0237039.

R 20-0CT-2000; 2000US-0241826.

R 20-0CT-2000; 2000US-0249214.

R 20-0CT-2000; 2000US-0249291.

R 20-0CT-
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AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (1) activity, and can be used in gene therapy and vaccine production. (1) activity, and can be used in gene therapy and vaccine production. (1) proteins and polynucleotides may be used in the prevention, diagnosis and proteins and polynucleotides may be used in the prevention, diagnosis and example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome expression by rectifying mutations or deletions in a patient's genome cappelement the patients own production of (1). Additionally, (1) polynucleotides may be used to produce the secreted (1), by inserting protein. (1) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic related diseases, especially cancers metastases of haematopoietic derived cells. AAK64703 to AAK8054 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK49492 to AAK8050 and AAM82169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and meratasis.
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                                                                                                                                                                         Disclosure; SEQ ID NO 28132; 3071pp + Sequence Listing; English.
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100.0%; Pred. No. 9.8e-66;
Live 0; Mismatches 0;
                                  Ruben SM;
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                                  Barash SC,
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                                                                   WPI; 2001-483426/52
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2000US-019874.
2000US-0198123.
2000US-020515.
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                                                                                 AAK54951 to AAK64702 encode the human immune/haematopoletic antigen (I) amno acid sequences given in AAM82170 to AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoletic related diseases, especially cancers and cancer metastases of haematopoletic antigen genomic sequences from the present human immune/manatopoletic antigen genomic sequences from the present invention. AAK84921 to AAK84950 and AAM82169 represent invention.
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Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and
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                                                          Claim 1; SEQ ID NO 3732; 3071pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                                                                                                                          Score 174; DB 22;
Pred. No. 3.3e-49;
1; Mismatches 8;
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94.98;
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27-APR-2000; 2000US-0560875.
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Matches 188; Conservative
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encoded polypeptides (AAM)8323-AAM80302) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polymetedides and polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, immunomodialistory activity and activity, tissue growth factor activity, immunomodilatory activity and activity and may be useful in the diagnosis and/or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation.
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Wang ZW;
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Chen R,
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                                                                                                                                                                                                                                                                       Zhou P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45.5%; Score 129.6; DB 27
66.4%; Pred. No. 9.6e-34;
Live 0; Mismatches 94
                                                                                                                                                                                                                                                             Liu C, Drmanac RT, Asundi V, Zhou
Wang D, Wang J, Zhang J, Ren F,
Yang Y, Wejhrman T, Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 2450-2452; 6221pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful in diagnosis and gene therapy
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                         19-JUL-2000; 2000US-0620325.
01.5EP-2000; 2000US-0654936.
15-SEP-2000; 2000US-065351.
20-OCT-2000; 2000US-0693325.
30-NOV-2000; 2000US-0728422.
2000US-0598075
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Best Local Similarity 66.4
Matches 186; Conservative
                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2001-476283/51.
                                                                                                                                                                                                           (HYSE-) HYSEQ INC
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                                                                                                                                                                                                                                                                       Tang YT,
Zhao QA,
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Query Match
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                                                                                                                                                                                                                                                        The invention relates to a novel human mitochondrial solute carrier protein, hMSC-o (AAB60658), and cDNA encoding it (AAF59920). hMSC-o is expressed in normal human hypothalamus tissue. The invention also relates to the preparation of hMSC-o proteins and nucleic acids, and the detection of hMSC-o proteins and nucleic acids in a sample. The present sequence represents cDNA encoding hMSC-o.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human, open reading frame, ORFX, detection, cytostatic, hepatotropic, vulnerary; antipsoriatic, antiparkinsonian; nootropic, neuroprotective, anticonvulsant, osteopathic; antiarthritic; immunosuppressant; cardiant;
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                                                                                                                                                                                                                 New human mitochondrion solute carrier protein and its nucleic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
         carrier protein; hMSC-o; hypothalamus;
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                                                                                                                                                                                                                                                                                                                               Sequence 1305 BP; 292 A; 388 C; 363 G; 262 T; 0 other;
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                                                                                                                                                                                                                                     Claim 1; Page 19-20; 21pp; Chinese.
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                                                                                                   17-MAR-2000; 2000CN-0114958
                                                                                                                       17-MAR-2000; 2000CN-0114958
          solute
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                                                                                                                                                                Xiao H;
                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 66.1
Matches 185; Conservative
                   preparation; detection;
         Human mitochondrial
                                                                                                                                                                                   2001-050544/07
                                                                                                                                                                Gao X,
                                                                                                                                                                                            P-PSDB; AAB60658
                                       Homo sapiens
                                                          CN1269409-A.
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                                                                                                                                                                Zhang X,
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AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatotropic; vulnerary; antiparkinsonian; nootropic; neuroprotective; costeopathic; anticonvulsant; antiarthritic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coapulant; vasotropic; antidiabetic; hypotensive; dermaclogical; immunosuppressive; antidiabetic; hypotensive; dermaclogical; immunosuppressive; antidiabetic; hypotensive; dermaclogical; immunosuppressive; antidiabetic; hypotensive; dermaclogical; immunosuppressive; antidiabetic; proteinsing or preventing or treating the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORFX-associated disorder. The nucleic acids may be used to treat cancers, pathological conditions and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypothyroidism, cholesterol ester storage, systemic lupus crythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, noctural has empolopinizia, antinflammatory disease; to enhance
                                                                                                                              hypertension;
                                                                                                                 antianaemic; gene therapy; cancer; proliferative disorder; hypertension; neurodegenerative disorder; osteoathriits; graft vs host disease; cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           256 atgcagagttttgagtccagatcccaaagcccagtacacaagtatctacggagccctcaag 315
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immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel nucleic acids and peptides derived from open reading frame X,
                                    hypotensive; dermatological; immunosuppressive; antiinflammatory; antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease
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99US-0127728.
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05-APR-1999;
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                                                                                                                                                                                                                                                                               Human; bone marrow; antiinflammatory; cytostatic; neuroprotective; antiviral; antibacterial; antifungal; anti-HIV; haemostatic; immunosuppressive; gene therapy; cytokine cell proliferation; cell differentiation modulator; immune disorder; infection; cancer; human immunodeficiency virus; HIV; autoimmune disorder; haemophilia; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence is one of 251 novel human polynucleotides expressed in the bone marrow. The polynucleotide and the polynucleotide and the polypeptide encoded by it are useful in the treatment of various immune deficiencies and disorders. The deficiencies and disorders may be genetic, may be caused by a viral (e.g. HIV), bacterial or fungal infection, or may result from an autoimmune disorder, a coagulation disorder (e.g. haemophilia), inhibition of tumour cell proliferation, suppression of an inflammatory response or treatment of a nervous system disorder such as Alzheimer's disease. Detection of the presence or increased expression of the polynucleotide or the protein it encodes is useful for the diagnosis and/or prognosis of one
                     ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
                                                                            Novel bone-marrow-expressed polynucleotides and polypeptides, useful for treating e.g. cancer and immune deficiency disorders -
aaaatcatgcggaccgaaggcttctggaggcccttgcgaggcgtcaacgtcatgatcatg
                                          376 ggtgcagggccagcccatgccatgtattttgcctgctatgaaaacatgaaaaggacttta
                                                                 Liu C, Asundi V, Chen R, Ma Y;
Xu C, Xue AJ, Yang Y, Zhang J;
                                                                                                                                    gccaccctgctccacgatgcggtaatgaatccagcagaag
                                                                                                              gcaacattacttcatgatgcagccatgaaccctgcggaag
                                                                                                                                                                                                                                                           Human bone marrow cDNA, SEQ ID NO: 301.
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Zhou P, Drmanac RT;
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2000US-0552317.
2000US-0598042.
2000US-0620312.
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2000US-0662191.
2000US-0693036.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (HYSE-) HYSEQ INC
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Zhao QA,
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  be
of
                                                                                                                                                                                                                                                                                   1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
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or more types of cancer. The polynucleotide and polypeptide can used as nutritional sources or supplements and in the screening chemical compounds as potential drugs.
                                                                                                                                                                                                                            0;
                                                                                                                                                                          44.9%; Score 128; DB 22; Length 2562;
66.1%; Pred. No. 3.8e-33;
iive 0; Mismatches 95; Indels 0
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arcia PD, Garcia V, Giese K, Innis MA;
sam A, Kennedy GC, Kita D, Labat I;
hwwitz D, Pot D, Randazzo F, Reinhard
Sudduth-Klinger J, Williams LT;
                                                                                                   652 T; 0 other;
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Garcia V, Glesc.
Kennedy GC, Kita D, Labr
                                                                                                 Sequence 2562 BP; 623 A; 660 C; 627 G;
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Jones WL, Kassam A, Kennedy GC, K
Lamson G, Leshkowitz D, Pot D, Ra
Chronbe-Crain B, Sudduth-Klinger J,
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98US-0072910.
98US-0075954.
98US-0080114.
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Matches 185; Conservative
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28-JAN-1998;
24-FEB-1998;
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200

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Claim 1; Page 774; 2479pp; English.
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The present invention describes a library of human polynucleotides comprising the sequences given in AAZ12532 to AAZ1779. Also described is comprising the sequences given in AAZ12532 to AAZ17779. Also described is a method of detecting differentially expressed genes correlated with the cancerous state of a mammalian cell, comprising detecting at least one differentially expressed gene product in a test sample from a cell suspected of being cancerous, where the gene product is encoded by one of the 5248 polynucleotide sequences given in AAZ12532 to AAZ1779. The Colynucleotides can be used as a source of primers and probes, which can be used for a variety of purpose, e.g. detection of expression levels, ampping, tissue typing or profiling, forensics, genetic analysis and detection of polymorphisms. Polypeptides encoded by the polynucleotides can be used for raising antibodies for experimental, diagnostic and therapeutic purposes. The polynucleotides may also be used to construct arrays for diagnostics (which may be used to determine function of an encoded protein); and to detect differences in expression levels between two cells (e.g. to identify abnormal or diseased tissue in a human, to identify agentic predisposition or susceptibility to a disease such as cancer). The polynucleotides of the invention are especially used in the diagnosis, prognosis and management of colorectal cancer, breast cancer, repeated and management of colorectal cancer, breast cancer, reconstructs. peptide analogues and antagonists.  $\overset{\times}{\times}$ 

Sequence 300 BP; 83 A; 76 C; 79 G; 62 T; 0 other;

0; Gaps Query Match 42.5%; Score 121; DB 20; Length 300; Best Local Similarity 100.0%; Pred. No. 3.6e-31; Matches 121; Conservative 0; Mismatches 0; Indels ( g

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Search completed: September 28, 2002, 08:06:28 Job time: 11583 sec

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Sequence 20, Sequence 21, Sequence 1, A Sequence 1, A Sequence 1, A Sequence 1, A Sequence 1, B Sequence 1, B Sequence 5, F Sequence 5, F

Sequence Sequence Sequence

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Sequence:

Minimum DB Maximum DB

Database

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COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: Date PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/068,140A
                                                                                                                                                                                                                                                                                            APPLICANT: Mary Rose Woodhead, Mark Andrew Taylor APPLICANT: and Rex Michael Brennan
TITLE OF INVENTION: Blackcurrant Promoters and Genes
NUMBER OF SEQUENCES: 15
US-08-807-861A-38
US-09-210-681-38
US-09-056-105-17 6
US-09-056-105-17 6
US-08-724-394A-21
US-08-724-394A-21
US-08-724-394A-21
US-08-724-394A-21
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US-09-225-170-1
US-09-37-466-5
US-09-172-528-5
US-09-173-528-5
US-09-173-528-5
US-09-173-528-5
US-09-503-579-5
                                                                                                                                                                                                                                                                                                                                                 E: SmithKline Beecham Corporation 709 Swedeland Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
PRIOR APPLICATION DATA:
PAPLICATION NUMBER:
FILING DATE: No. 6281409ember 4, 1996
ATTORNEY/AGENT INFORMATION:
NAME: Dinner, Dara L.
REGISTRATION NUMBER: 33,680
REFERENCE/DOCKET NUMBER: C70237
                                                                                                                                                                                                            ALIGNMENTS
                                                                                                                                                                                                                                                              ; Sequence 9, Application US/09068140A; Patent No. 6281409; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5017
TELEFAX: 610-270-5090
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SEQUENCE CHARACTERISTICS:
LENGTH: 1311 base pair
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CITY: King of Prussia
STATE: PA
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US-09-068-140A-9
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ZIP: 19406-0939
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  TELEX:
  ; Search time 182.06 Seconds (without alignments) 384.519 Million cell updates/sec
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                                                                                                                                   1 atgcagagtctacagcctga......tgaaccctgcggaaggctga 285
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/cgn2_6/ptodata/2/ina/5B_COMB.seq:*
/cgn2_6/ptodata/2/ina/6A_COMB.seq:*
/cgn2_6/ptodata/2/ina/6B_COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
/cgn2_6/ptodata/2/ina/PCTUS_COMB.seq:*
          4.5
Compugen Ltd.
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US-08-185-432-1
US-09-106-182-1
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US-08-518-878B-38
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US-08-470-868A-38
                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
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                                                                      September 28, 2002, 07:55:54
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          GenCore version
Copyright (c) 1993 - 2000
                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                  nucleic search, using sw model
                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
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                                                                                                                                                                                                                              length: 0
length: 2000000000
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3391 AAGCCCTTGGGTCGATACTGAAAGTTGAAGGTCCCGCCGGACTTTACCGTGGCATTGGTG 3450
50 aggccctctggaggattataaagaacggagggcctatggaggcccatgagggggctgaacg 109
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APPLICANT: Shah, Purvi
APPLICANT: Au-Young, Janice
APPLICANT: Yue, Henry
APPLICANT: Corley, Neal J.
TITLE OF INVENTION: HUMAN REGULATORY MOLECULES
NUMBER OF SEQUENCES: 98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
CORPATING SYSTEM: DOS
SOFTWARE: FastSRO for Windows Version 2.0
CURRENT APPLICATION DATA:
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49.4%; Pred. No. 0.16;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3: Incyte Pharmaceuticals, Inc 3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PF-0356 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/933,750C FILING DATE: September 23, 1997
                                                                                                                                                                                                                                                                   US-08-933-750C-68
Sequence 68, Application US/08933750C
Patent No. 5932442
                                                                                                                                                                                                                                                                                                                                                Lal, Preeti
Hillman, Jennifer L.
Bandman, Olga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . 89
                                                                                                                                                                        3511 AGGAGACTTTTTCTCATG 3528
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SEQUENCE CHARACTERISTICS:
LENGTH: 1643 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 49.44
Matches 83; Conservative
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APPLICATION NUMBER:
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Ph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LIBRARY: SYNOOAT01
; CLONE: 724157
US-08-933-750C-68
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                                                                                                                                                                 50 aggccctctggaggattataagaacggaggcctatggaggcccatgaggggctgaacg 109
                                                                                                                             227 AAGCCCTTGGGTCGATACTGAAAGTTGAAGGTCCCGCCGGACTTTACCGTGGCATTGGTG 286
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
0
              Score 32.4; DB 4; Length 1311; Pred. No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 32.4; DB 4; Length 5150;
Pred. No. 0.19;
0; Mismatches 66; Indels 0
                                                    66; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: PA COUNTRY: USA
ZIP: 19406-0939
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30 (EPO)
APPLICATION NUMBER: US/09/068,140A
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Mary Rose Woodhead, Mark Andrew Taylor APPLICANT: and Rex Michael Brennan
TITLE OF INVENTION: Blackcurrant Promoters and Genes NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKilne Beecham Corporation
STREET: 709 Swedeland Road
                                                    0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/EP96/04807
FILING DATE: No. 6281409ember 4, 1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                  Sequence 14, Application US/09068140A Patent No. 6281409 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Dinner, Dara L.
REGISTRATION NUMBER: 33,680
REFERENCE/DOCKER NUMBER: C70237
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5017
TELEFROX: 610-270-5090
                11.4%;
52.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11.4%;
52.2%;
                                                                                                                                                                                                                                                170 aaaagacattgagtgatg 187
                                                                                                                                                                                                                                                                                     347 AGGAGACTTTTTCTCATG 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 5150 base pairs
TYPE: nucleic acid
                            Best Local Similarity 52.23
Matches 72; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; ORGANISM: Ribes nigrum
; STRAIN: Ben Alder
US-09-068-140A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 709 Swedeland CITY: King of Prussia
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
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Best Local Similarity
Matches 72; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGINAL SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ANTI-SENSE: NO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HYPOTHETICAL:
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              Query Match
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Sequence 33, Application US/08630915A
Patent No. 6309820
GENERAL INFORMATION:
APPLICANT: SPARKS, Andrew B.
APPLICANT: HOFFWAN, No. 6309820h
APPLICANT: KVI, BRIAM K.
APPLICANT: MCCONNELL, Stephen J.
APPLICANT: POWLKES, Dana M.
APPLICANT: POWLKES, Dana M.
TITLE OF INVENTION: POLYPEPTIDES HAVING A FUNCTIONAL
TITLE OF INVENTION: DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
TITLE OF INVENTION: USING SAME
NUMBER OF SEQUENCES: 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1055 AGCACCAGTGGCCCGGGATGCCCATGAACTGGCGCGCAGTTCGAGGAGTGGAACCCAGAC 1114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  995 CGAGAACTGGAGCCAGCCATCCGGGGGGCCGATGCCCAGGAGGACCTCAGGTGGTTCCGC 1054
         86 ggaggcccatgagggggctgaacgtcacagcaacaggcgcagggcctgcccacgcccttt 145
                                               542 GGACCCTCTGGAGCGGCCTCCCCGCCACCTGGTGATGACTGTGCCAGCTACCGCCATCT 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70 agaacggagggcctatggaggcccatgagggggttgaacgtcacagcaacaggcgcaggg 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 ctacagectgaeceagetgeeegetategeaatgtgttggaggeeetetggaggattata 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10.4%; Score 29.6; DB 4; Length 4091; 51.5%; Pred. No. 1.7;
                                                                                                                           146 attttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatcc 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURREMY APPLICATION DAR:
APPLICATION NUMBER: US/08/630,915A
FILING DATE: 03-APR-1996
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: Pennie & Edmonds LLP
1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 18,872
REFERENCE/DOCKET NUMBER: 1101-:
RELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
TELERAX: (212) 869-8864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 33:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 51.5
Matches 68; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Pennie &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1115 CTCCCGCACACC 1126
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                                                                                                                                                                                                               RESULT 5
US-08-630-915A-33
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COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
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                                             86 ggaggcccatgagggggctgaacgtcacagcaacaggggcgcagggcctgcccacgccttt 145
482 CTACCCGCTTCACTGGCACCATGGATGCCTTCGTGAAGATCGTGAGGCACGAGGGCACCA 541
                                                                                     542 GGACCCTCTGGAGCGGCCTCCCCGCCACCCTGGTGACTGTGCCAGCTACCGCCATCT 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26 ctgcccgctatcgcaatgtgttggaggccctctggaggattataagaacggaggcctat 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.2%; Score 32; DB 3; Length 1643; llarity 49.4%; Pred. No. 0.16; Conservative 0; Mismatches 85; Indels
                                                                                                                                                                                602 ACTICACTGCCTATGACCAACTGAAGGCCTTCCTGTGTGGTCGAGCCC 649
                                                                                                                                       146 attttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatcc 193
                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Lal, Preeti
APPLICANT: Lal, Preeti
APPLICANT: Hiliman, Jennifer L.
APPLICANT: Shah, Purvi
APPLICANT: Ala, Purvi
APPLICANT: Yue, Henry
APPLICANT: Coregler, Karl J.
APPLICANT: CORIEY, Neil C.
TITLE OF INVENTION: HUMAN REGULATORY MOLECULES
NUMBER OF SEQUENCES: 98
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFFWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/234,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STREET: Incyte Pharmaceuticals, Inc. STREET: 3174 Porter Drive CITY: Palo Alto STATE: CA COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/933,750
FILING DATE: September 23, 1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                Sequence 68, Application US/09234613
Patent No. 6132973
GENERAL INFORMATION:
APPLICANT: Lal, Preeti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 36,749
REGISTRATION NUMBER: 36,749
REFERENCE/DOCKET NUMBER: PF-
TELECOMMUNICATION:
TELEPHONE: 415-855-0555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 1643 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE: 415-855-05:
TELEFAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic acid
EDNESS: single
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Best Local Similarity
Matches 83; Conserv
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; CLONE: 724157
US-09-234-613-68
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Sequence 1, Application US/09457708
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                                                                                                      APPLICANT: Freeman Jr., Robert M.
APPLICANT: Plutzky, Jorge
APPLICANT: Neel, Benjamin G.
TITLE OF INVENTION: IDENTIFICATION OF NOVEL TYROSINE
TITLE OF INVENTION: PHOSPHATASES HAVING SH2 DOMAINS
NUMBER OF SEQUENCES: 54
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                           ADDRESSEE: Hamilton, Brook, Smith & Reynolds, P.C. STREET: Two Militia Drive CITY: Lexington
                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: TOP PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/202,389
FILING DATE: 28-FEB-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  156 ctacgaaaagttaaaaaagacattgagtgatgt 188
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/983,926
FILING DATE: 01-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/829,141
FILING DATE: 31-JAN-1992
PRIOR APPLICATION NUMBER: US 07/721,112
FILING DATE: 26-UNN-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: BIH92-05MA TELECOMMUNICATION INFORMATION: TELEFHONE: (617) 861-6240 TELEFAX: (617) 861-9540 INFORMATION FOR SEQ ID NO: 1:
                                                      Sequence 1, Application US/08202389
Patent No. 5536636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Granahan, Patricia
REGISTRATION NUMBER: 32,227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10.2%;
ilarity 57.0%;
Conservative C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2..1540
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Best Local Similarity
Matches 53; Conserva
                                                                                         GENERAL INFORMATION:
APPLICANT: Freeman
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                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                   CITY: Lexir
STATE: MA
COUNTRY: US
                                                                                                                                                                                                                                                                                                                                                                               02173
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; LOCATION:
US-08-202-389-1
              RESULT 6
US-08-202-389-1
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US-09-457-708-1/c

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100 gggctgaacgtcacagcaacaggcgcagggcctgcccacgccctttattttgcctgctac 159
Patent No. 6326483
GENERAL INFORMATION:
APPLICANT: Sampson, Julian R.
APPLICANT: Sampson, Julian R.
APPLICANT: Povey, Sue
APPLICANT: Povey, Dicky
TITLE OF INVENTION: Compositions and Methods Based U
TITLE OF INVENTION: Sclerosis-1 (TSC-1) Gene and Gene Product
NUMBER OF SEQUENCES: 28
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
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Patent No. 5502166
GENERAL INPORMATION:
APPLICANT: MASAYOSHI MISHINA
TITLE OF INVENTION: NOVEL PROTEINS AND GENES CODING THE SAME
CORRESPONDENCE ADDRESS:
ADDRESSED: Nishlohata Residence 1-107
STREET: 5214, Mishlohata-machi
CITY: Nishlohata-shi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 10.2%; Score 29; DB 4; Length 8600; Best Local Similarity 58.8%; Pred. No. 3.8; Matches 50; Conservative 0; Mismatches 35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/457,708
                                                                                                                                                                                                                                                                      E: Vinson & Elkins
1455 Pennsylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BRI331/42002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7690 CTACAGACAAAGCTTAATCAAGTG 7666
                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          160 gaaaagttaaaaaagacattgagtg 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: Sanzo, Michael A.
REGISTATION UNDRER: 36,912
REFERENCE/DOCKET UNDRER: BRI3:
TELECOMMUNICATION INFORMATION:
TELEPANE: (202) 639-6585
TELEPAN: (202) 639-6604
INFORMATION FOR SED ID NO: 1:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 8600 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Niigata-ken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: CDNA HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                            STREET: 1455 Peni
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U.S.
ZIP: 20004-1008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JAPAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-026-138E-17/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ANTI-SENSE:
US-09-457-708-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE: N. COUNTRY:
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US-09-268-163-9/c

Sequence 9, Application US/09268163B

Patent No. 6353091

GENERAL INFORMATION:

APPLICANT: Lipscombe, Diane

APPLICANT: Schorge, Stephanie

TITLE OF INVENTION: HUMAN N-TYPE CALCIUM CHANNEL ISOFORM AND USES THEREOF

FILE REFERENCE: B1055/7000

CURRENT APPLICATION NUMBER: US/09/268,163B

CURRENT PILING DATE: 1999-03-12

EARLIER APPLICATION NUMBER: US 60/077,901

EARLIER PILING DATE: 1998-03-13

NUMBER OF SEQ ID NOS: 28

SOFTWARE: FastSEQ for Windows Version 3.0

LENGTH: 7011
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6: FROM 1 to 4446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENES CODING THE SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10.0%; Score 28.4; DB 1;
70.4%; Pred. No. 4.5;
Live 0; Mismatches 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 28.2; DB
Pred. No. 6.6;
0; Mismatches
                                                                                                                   FILING DATE: 26-FEB-1992
APPLICATION NUMBER: JP 173155/1992
FILING DATE: 30-JUN-1992
APPLICATION NUMBER: JP 215017/1992
FILING DATE: 12-AUG-1992
APPLICATION NUMBER: JP 303878/1992
FILING DATE: 13-NOV-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMALL.
ATTORNEY/AGENT INFORMALL.
NAME: Hamburg, C. Bruce
REGISTRATION NUMBER: 22,389
REFERENCE/DOCKET NUMBER: F-4551
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 986-2340
TELEPAX: (212) 986-2340
TELEPAX: (312) 953-7733
; INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 4446 nucleic acids
TYPE: nucleic acid
TYPE: nucleic acid
                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 39563/1992
FILING DATE: 26-FEB-1992
APPLICATION NUMBER: JP 173155/1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; TITLE: NOVEL PROTEINS AND GENES; RELEVANT RESIDUES IN SEQ ID NO: US-08-026-138E-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9.9%;
54.3%;
                                       FILING DATE: 26-FEB-1993
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 70.44
Matches 38; Conservative
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Best Local Similarity 54.3'
Matches 57; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
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US-09-268-163-9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δy
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TITLE OF INVENTION: NOVEL PROTEINS AND GENES CODING THE SAME
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
ADDRESSEE: Nishiohata Residence 1-107
STREET: 5214, Nishiohata-machi
CITY: Nishata-shi
STATE: Nishata-ken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10.0%; Score 28.4; DB 1; Length 4368; ilarity 70.4%; Pred. No. 4.5; Conservative 0; Mismatches 16; Indels 0;
ZIP: 951

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 MB storage
COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS v.5
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/026,138E
FILING DATE: 26-FEB-1993
PRIOR APPLICATION NUMBER: JP 39563/1992
FILING DATE: 26-FEB-1992
APPLICATION NUMBER: JP 173155/1992
FILING DATE: 13-MOV-1992
APPLICATION NUMBER: JP 21017/1992
FILING DATE: 13-MOV-1992
APPLICATION NUMBER: JP 303878/1992
FILING DATE: 13-NOV-1992
APPLICATION NUMBER: JP 303878/1992
FILING DATE: 13-NOV-1992
APPLICATION NUMBER: F*4551
FILING DATE: 13-NOV-1992
APPLICATION NUMBER: JP 303878/1992
FILING DATE: 13-NOV-1992
APPLICATION NUMBER: JP 303878/1992
FILING SATE: 13-NOV-1992
APPLICATION NUMBER: JP 303878/1993
FILING SATE: 13-NOV-1992
APPLICATION NUMBER: JP 303878/1993
FILING SATE TABLESTICE: JP 386-2340
FEERENX: (212) 986-2340
FEERENX: (212) 986-2340
FEERENX: (212) 985-37733
FEERENX: (212) 985-37733
FEERENX: (212) 985-37733
FEERENX: (212) 986-2340
FEERENX: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE TYPE: brain
PUBLICATION INFORMATION:
AUTHORS: Masayoshi MISHINA
TITLE: NOVEL PROFIEINS AND GENES CODING THE SAME
RELEVANT RESIDUES IN SEQ ID NO: 17: FROM 1 to 4368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPOURE READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 MB storage COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS v.5
SOFTWARE: Word Perfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/08/026,138E
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; Sequence 6, Application US/08026138E
; Parent No. 5502166
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 38; Conserva
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267 gaaccctgcggaaggc 282
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Best Local Similarity
Matches 60; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-185-432-3/c
                                                                                                                                      US-09-162-484-19
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6357 TGAAGAAGAGGAGGGCTCCCCTCCGCTCGGACCGCCCTCGCTTACCTTACGCTC 6298
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                                                                                                                                                                                                                                                                                                                            APPLICANT: So, Maddalene
APPLICANT: Hwa, Vivian
APPLICANT: No. 6121037el Bacterial Hemoglobin Receptor TITLE OF INVENTION: Genes and Uses
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSEE: McDonnell Boehnen Hulbert & Berghoff
STREET: 300 South Wacker Drive, 32nd Floor
CITY: Chicago
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9.8%; Score 28; DB 3; Length 2379;
46.4%; Pred. No. 4.6;
tive 0; Mismatches 105; Indels
                                                                                                                6297 ccgccgccagccrgrgacccrrcrccargggcaggcagarcc 6253
                                                                    227 cggccgggtgtgtggcaacattacttcatgatgcagccatgaacc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATUS SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: 02-OCT-1995
CLASSIFICATION: 536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: NO. 6121037nan, Kevin E
REGISTRATION NUMBER: 35,303
REELECHONE/DOCKET NUMBER: 94,784-A
TELECOMMUNICATION INFORMATION:
TELEPHONE: 312-913-0001
TELEPHONE: 312-913-0002
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 2379 base pairs
                                                                                                                                                                                     RESULT 11
US-08-537-361E-5/c
; Sequence 5, Application US/08537361E
; Patent No. 6121037
                                                                                                                                                                                                                                                                                                           Stojiljkovic, Igor
So, Magdalene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOLECULE TYPE: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ouery Match
Best Local Similarity 46.4
Matches 91; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1..2376
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: USA
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                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Stojil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 60606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-537-361E-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             셤
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Sequence 3, Application US/08185432
Sequence 3, Application US/08185432
Patent No. 5750652
GENERAL INFORMATION:
APPLICANT: Artavanis-Tsakonas, Spyridon
APPLICANT: Busseau, Isabelle
APPLICANT: Autavanis-Tsakonas, Spyridon
APPLICANT: Autavanis-Tsakonas, Spyridon
TITLE OF INVENTION: Renji
TITLE OF INVENTION: DELTEX PROFEINS, NUCLEIC ACIDS, AND
TITLE OF INVENTION: ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDMONDS
STREET: 1155 Avenue of the Americas
CONTY: NOW YORK
                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Phillips, M. Ian
APPLICANT: Phillips, M. Ian
APPLICANT: Phillips, M. Ian
APPLICANT: Phillips, M. Ian
APPLICANT: Moducay, Dagmars
TITLE OF INVENTION: ANTIENSE OLIGONUCLEOTIDE COMPOSITIONS TARGETED TO
TITLE OF INVENTION: ANGIOTENSIN CONVERTING ENZYME MRNA AND METHODS OF USE
FILE REFERENCE: UFLA.087/UFLA087P
CURRENT FILING DATE: 1998-09-25
EARLIER APPLICATION NUMBER: 60/059,661
EARLIER FILING DATE: 1997-09-25
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   133 goccaegecetttattttgeetgetacgaaaagttaaaaaagaeattgagtgatgtaate 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9.7%; Score 27.6; DB 4; Length 3942; 52.6%; Pred. No. 8.2; tive 0; Mismatches 54; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/185,432 FILING DATE: 21-JAN-1994 CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PC-DOS/MS-DOS
                                                                                                                                            . Sequence 19, Application US/09162484
: Patent No. 6248724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-
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ATTORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 18,872
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; ORGANISM: Rattus norvegicus
US-09-162-484-19
1210 AATCACGCCGCTGGC 1195
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MEDIUM TYPE: Floppy
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SEQUENCE CHARACTERISTICS:
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US-08-475-844-8
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APPLICANT: Busseau, Isabelle
APPLICANT: Busseau, Isabelle
APPLICANT: Busseau, Isabelle
APPLICANT: Xu, Tian
APPLICANT: Matsuno, Kenji
TITLE OF INVENTION: DELTEX PROTEINS, NUCLEIC ACIDS, AND
TITLE OF INVENTION: ANTIBODIES, AND RELATED METHODS AND COMPOSITIONS
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: PENNIE & EDMONDS
STREET: NEW YORK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69 aagaacggaggcctatggaggcccatgaggggctgaacgtcacagcaacaggcgcagg 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  975 GTTTCACCAAGGGATACGCCCCTGTTGGGTACGCCGAATGCTGCCATGGGTCCGCTGG 916
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                                                                                                                                                                                                                                                                                                                                                                                                   DB 1; Length 3771;
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SOFTWARE PATENTIN STATEM.

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/185,432

FILING DATE: 21-JAN-1994

CLASSIFICATION: 530

ATTORNEY/AGENT INFORMATION:

NAME: Misrock, S. Leslie

REGISTRATION NUMBER: 18,872

REFERENCE/DOCKET NUMBER: 7326-006

TELERENCE/DOCKET NUMBER: 7326-006

TELERENCE (212) 790-9090

TELERAX: (212) 790-9090

TELERAX: (212) 790-9090
REFERENCE/DOCKET NUMBER: 7326-006
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 790-9090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 23, Application US/08185432
Patent No. 5750652
                                           TELEPHONE: (212) 790-9090
TELERAX: (212) 869-8864/9741
TELEX: 66141 PENNIE
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 3771 base pairs
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                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 9.5
Best Local Similarity 49.3
Matches 71; Conservative
                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                         CDS
345..2558
                                                                                                                                                                                                                       TOPOLOGY: unknown MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: New York COUNTRY: U.S.A. ZIP: 10036-2711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                    ; NAME/KEY:
; LOCATION:
US-08-185-432-3
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US-08-185-432-23
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2797 GTTTCACCAAGGGATACGCCCCTGTTGGGTACGCCGAATGCTGCGCATGGGTCCGCTGG 2856
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/475,844
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 07-JUN-1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/261,680
FILING DATE: 17-JUN-1994
CLASSIFICATION: 536
ATTONNEY, AGBNT INFORMATION:
NAME: PARMELee, Steven W.
REGISTRATION NUMBER: 31,990
REPERENDE/DOCKET NUMBER: 31,990
REPERENDE/DOCKET NUMBER: 31,990
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 8, Application US/08475844
Patent No. 5972643
GENERAL INFORMATION:
APPLICANT: Lobanenkov, Victor V.
APPLICANT: Rienova, Elena M.
APPLICANT: Rienova, Elena M.
APPLICANT: Filippova, Galina M.
APPLICANT: Collins, Steven J.
TITLE OF INVENTION: CTCF
NUMBER OF SEQUENCES: 21
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2857 GTTGGCGCACGTGGGTGAGATTGC 2880
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           129 gcctgcccacgccctttattttgc 152
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nucleic acid
EDNESS: double
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STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: San Francisco
                                                    ; TOPOLOGY: unknown
; MOLECULE TYPE: cDNA
US-08-185-432-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CA
USA
  TYPE: nucleic STRANDEDNESS:
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ORGANISM: Homo sapiens
IMMEDIATE SOURCE:
CLONE: human CTCF CDNA
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NAME/KEY: CDS
LOCATION: 292..2475
FEATURE:
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LOCATION: 281..1074
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NAME/KEY: exon
LOCATION: 1500..1649
OTHER INFORMATION: /label= exon6
FEATURE:
NAME/KEY: exon
LOCATION: 1650..1810
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CCATION: 1810..1992
CTHER INFORMATION: /label- exon8
US-08-475-844-8
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0; Gaps Query Match 9.5%; Score 27.2; DB 2; Length 3810; Best Local Similarity 64.1%; Pred. No. 11; Matches 41; Conservative 0; Mismatches 23; Indels 0 QQ

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Search completed: September 28, 2002, 07:56:00 Job time: 11245 sec

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113.8
113.8
109.8
107.6
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285
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Copyright (c) 1993 - 2000 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 1.0
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Perfect score:
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	Score	280	277.6	265.8	257.4	246.8	246.8	246.8	245.2	244.6	234	224.4	223.4	223.2	195.4	191.8	191.6	188.4
	Result No.	1 1	7	m	4	Ŋ	9	7	œ	6	10	11	12	13	14	15	16	17

ALIGNMENTS .	1 BI827322 747 bp mRNA linear EST 04-0CT-2001 N 603077989F1 NIH_MGC_119 Homo sapiens cDNA clone IMAGE:5169694 5', BI827322 BI827322 BI827322 GI:15938872 EST.	Σ	Contact: Robert Strausberg, Ph.D. Email: cgapbs-remail.nih.gov Tissue Procurement: Life Technologies, Inc. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAMIA1422 row: a column: 23 High quality sequence stor: 743	
	RESULT 1 B182732 LOCUS DEFINITION ACCESSION VERSION KEYMORDS SOURCE	ORGANISM REFERENCE AUTHORS TITLE JOURNAL	COMMENT	FEATURES SOURCE

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Best Local Similarity
Matches 278; Conserv
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0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NHWC Library." I others
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AL530804 LTI_NFL001_NBC4 Homo sapiens cDNA clone CS0DD008YH17 5
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Wataryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Li, Was, Gruber.C., Jessee,J. and Polayes,D.

Full.length cDNA libraries and normalization

Unpublished (2001)
                                                                                                                                                                                                                                                                       61 aggattataagaacggaggcctatggaggcccatgagggggtgaacgtcacagcaaca 120
                                                                                                                                                                                                                                                                                          121 ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
                                                                                                                                                                                                                                                                                                                                                                                                              264 AGTGATGTAATCCACCCTGGGGGCAATAGCCATATTGCCAATGGTGCGGCCGGGTGTGTG 323
                                                                                                                                                                                                                                         84 ATGCAGAGTCTACAGCCTGACCCAGCTGCCCGCTATCGCAATGTTTGGAGGCCCTCTGG 143
                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genoscope - Centre National de Sequencage
BP 191 91006 EVRX cedex - France
Emall: segrefégenoscope.cns.fr, Web : www.genoscope.cns.fr.
Location/Qualifiers
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0
                                                                                                                                   98.2%; Score 280; DB 10; Length 747; 100.0%; Pred. No. 3.1e-76; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="neuroblastoma cells"
/lab_host="DH108"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="CSDDD008YH17"
/clone_lib="LTI_NFL001_NBC4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AL530804.1 GI:12794297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prime, mRNA sequence.
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Bukaryota, Marazoa; Chordata; Craniata; Vertebrata; Buteleostomi;

Bukaryota; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 480)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R.,

Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F.

Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H.,

Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare

M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="Organ: prostate_normal; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BI045863 480 bp mRNA linear EST 14-JUN-2001
MR3-FN0209-300101-004-h10 FN0209 Homo sapiens CDNA, mRNA sequence.
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This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=MR3&t2=MR3-FN0209-300101-004-h10&t3=2001-01-30&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                 417 ATGCAGAGTCTACAGCCTGACCAGCTGCCCGCTATCGCAATGTGTTGGAGGCCCTCTGG 476
                                                                                                                                                                                                                                            61 aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
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         Length 888;
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Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                 Indels
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Score 277.6; DB 9.
Pred. No. 1.8e-75;
1; Mismatches 1.
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/db_xref="taxon:9606"
/clone_lib="FN0209"
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BI045863.1 GI:14452485
      97.4%;
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                                                                 Conservative
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Smith, T.P. L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Waray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. vector identified by cross_match with the -minscore 18
and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 30-AUG-2001
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovine; Bos.
application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the PUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                      61 aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
                                                                                                                                                                                                                                                                                          253
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                                                                                                                                                                                                                                                                                                                                                           1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                                                                                                                                                        1;
                                                                                                                                        Length 480;
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455541 MARC 1BOV Bos taurus cDNA 5', mRNA sequence.
BI541703
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
TTE1: 402 762 4390
Fax: 402 762 4390
                                                                                                                                     Score 265.8; DB 10;
Pred. No. 7.2e-72;
0; Mismatches 2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BACKWARD: GTTTCCCAGTCACGACG
Plate: 121 row: O column: 24
Seg primer: ATTTAGGTGACACTATAG.
Location/Qualifiers
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FORWARD: AGGAAACAGCTATGACCAT
                                                                      146 g
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                                                                                                                                     93.3%;
98.9%;
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                                                                                                                                                     Best_Local Similarity 98.9
Matches 278; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia: Butheria: Rodentia; Sciurognathi; Muridae; Murinae; Muses 1 to 598)

S NIH-WGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contect: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

Robert Strausberg, Ph
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                               /tissue_type="pooled"
/lab_host="DH10B"
/note="Vector: pCMV SPORT6; Site_1: Xba1; Site_2: XhoI;
Library made from pooled tissue from lymph node, ovary,
fat, hypothalamus, and pituitary."
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
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/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                           Score 257.4; DB 10;
Pred. No. 3.1e-69;
0; Mismatches 16; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone_lib="NCI_CGAP_Mam1"
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/db_xref="taxon:10090"
/clone_lib="MARC 1BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:3969256"
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                                                                                                                                                                                                                                                                                                                                                                                                                           90.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 267; Conservative
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BE913718
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us-09-870-113-9.rst

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house mouse.
                                                                        Similarity
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                                                       Query Match
Best Local Simi
Matches 260;
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ORIGIN
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TITLE
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BG295496
LOCUS
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KEYWORDS
SOURCE
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Sciurognathi; Muridae; Murinae; Mus.; I (bases 1 to 645)

National institutes of Health, Mammalian Gene Collection (MGC)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail nih.gov

Tissue Procurement: Jeffrey E. Green, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium/LLNL

CLone distribution: MGC colume distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

Clone distribution: MGC column: 24

High quality sequence start: 2

High quality sequence start: 2

Location (MGC)
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/organism="Mus musculus"
/strain="KPWN"
/db_xref="taxon:10090"
/clone="IMAGE:4983815"
/clone=lib="NOI_CGAP_CCO24"
/lab_host="DH10B (T1 phage-resistant)"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT. Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NOI_CGAP Library."
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Primer: Oligo dT
               Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH" _{\rm I} 172 g _{\rm I} 110 t
                                                                                                                                                                                                                                                                               61 aggattataagaacggaggcctatggaggcccatgaggggctgaacgtcacagcaaca 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       284 AGTGACGTAATCCACCCAGGGGGCAATAGCCATATTGCCAATGGTGCAGCCGGATGTGTG 343
                                                                                                                                                                                                                            Gaps
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                                                                                                                               DB 10; Length 598;
                                                                                                                                                                     22; Indels
Site_2: NotI; Cloned unidirectionally.
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92.2%; Pred. No. 6.2e-66;
iive 0; Mismatches 22
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                                                                                                                                                                     Matches 260; Conservative
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BG964218
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                                                                                                                                                   Best Local
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KEYWORDS
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ORGANISM
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                                                     BASE COUNT
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AUTHORS
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JOURNAL
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602392826F1 NIH_MGC_94 Mus musculus cDNA clone IMAGE:4504638 5',
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1 (bases 1 to 1131)
1 (bases 1 to 1131)
1 (bases 1 to 1139)
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/tissue_type="retina"
/lab_host="bH10B (phage-resistant)"
/lab_host="bH10B (phage-resistant)"
/note="Organ: eye; Vector: pCMV SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally; oligo-dT primed.
Average insert size 3.3 kb. Library enriched for
full-length clones and constructed by Life Technologies.
Note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10377 row: c column: 07
High quality sequence stop: 753.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                 61 aggattataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
                                                                                                                                                                                                                              1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
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  Length 645;
                                                   22; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
Score 246.8; DB 10
Pred. No. 6.3e-66;
0; Mismatches 22,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Mus musculus"
/db_xref="taxon:10090"
/clone="IMAGE:4504638"
/clone_lib="NIH_MGC_94"
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  86.6%;
92.2%;
                                                   Conservative
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86.6%; Score 246.8; DB 10; Length 1131;

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Seq primer: M13 -29 POLYA=No.
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Best Local Similarity
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BI185580.1
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BI185580
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                                                                                                                                                                                                                                                                                                                                                                                                                                                        BI794616 560 bp mRNA linear EST 01-OCT-2007 ic92e02.yl Melton Normalized Mixed Mouse Pancreas 1 N1-MMS1 Mus musculus cDNA 5' similar to TR:Q23125 Q23125 W02B12.9 PROTEIN. [1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Unpublished (2000)
Conter_ESTS: ic92002.x1
ContertESTS: ic92002.x1
Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
Endocrine Pancreas Consortium
Bravard University, Howard Hughes Medical Institute
Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
MA 02138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.
1 (bases 1 to 560)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center For information on
obtaining a clone please contact: Juliana Brown
(brownfeas.harvard.edu)
Seq primer: -40RP from Gibco
High quality sequence stop: 430.
Location/Qualifiers
1. 560
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /dev_stage="Embryonic day 10.5, E12.5, E16.5, newborn, adult, mixed"
/lab_host="DH10B"
                                                                                                                                                                                                 180
                                                                           aggattataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
                                                                                                                                                             380
                                                                                                                                                                                                                                   440
                                                                                                                                                                                                                                                                   agtgatgtaatccacctgggggcaatagccatattgccaatggtgcggccgggtgtgt 240
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                                                                                                                                                                                             1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                                                                                                                               0;
                          Indels
                                                                                                                                                                                                                                                                                                                                     7.3e-66;
ches 22;
92.2%; Pred. nv.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: dmelton@biohp.harvard.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BI794616.1 GI:15822341
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                         260; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;, mRNA sequence.
BI794616
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax: 617-495-8557
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       Similarity
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     Best Local :
Matches 26(
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/note="Vector: pSPORT1; Site_1: Not I; Site_2: Sal I; Five libraries representing EIO.5/12.5 pancreatic bud, EIG.5 pancreas, newborn pancreas, adult pancreas, and adult islets of Langerhans were seperately constructed using SuperScript Plasmid Library Kit (Life Technologies). CDNA was made by oligo-dT priming and size-selected by column fractionation. Libraries were amplified once on solid support and plasmid DNA from each library was prepared and mixed in equal amounts. The mixed library DNA was normalized by method #4 from Bonaldo, Lennon, and Soares 1996 Genome Research 6:791-806; O.5 microgram single-stranded mixed library plasmid DNA was mixed and bybridized to an Ecot of 6. Single-stranded (unhybridized to an Ecot of 6. Single-stranded (unhybridized by make this library."
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: dpomp@unl.edu Oligo-dT track not found, Not I site shown in beginning of sequence is likely internal to the message.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.

1 (bases 1 to 574)

5 Gaetano, A.R., Johnson, R.K. and Pomp, D.

Generation and sequence characterization of a normalized cDNA
library from swine ovarian follicles
L Unpublished (2001)
Contact: Pomp, D
Department of Animal Science
University of Nebraska, Lincoln
Lincoln, NE 6883.0908, USA
Tel: 402 472 6416
Fax: 402 472 6362
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Sus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 aggattataagaacggagggcctatggaggcccatgagggggggtgaacgtcacagcaaca 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg 60
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Pred. No. 1.9e-65;
0; Mismatches 23
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Eukaryota; Metazoa; Chordata; Craniata;
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91.8%;
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us-09-870-113-9.rst

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Query Match 82.1
Best Local Similarity 92.5
Matches 246; Conservative
                                                                                                        MGI:1029273
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                                                                                                                                                /dev_scaye_arou.
//deb_host="DH10B (Life Technologies)"
//deb_host="DH10B (Life Technologies)"
//note="Vector: p773D-pac (Pharmacia) with a modified
//note="Vector: p773D-pac (Pharmacia) with a modified
polylinker; Site_1: Not I; Site_2: Eco R; The UNL-P-FN
library is a normalized library representing porcine
ovarian follicles, ranging between 2.0 to 10.0 mm in
diameter, collected during 7 days of the follicular phase
of the pig estrous cycle. This library was derived from
the library UNL-P-F2. The tag is a string of 5-6
nucleotides present between the Not I site and the
oligo-dT track. The library was constructed as described
by Bonaldo, Lennon and Soares, Genome Research 6: 791-806
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NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                     Selection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Robert Strausberg, Ph.D.
Bhail: gapbs-remail.nth.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Chu-Xia Deng Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
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                                                   /strain="University of Nebraska, Lincoln Swine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 574;
                                                                                                                                                                                                                                                                                                                                                                                           others
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Pred. No. 2.9e-65;
0; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241 gcaacattacttcatgatgcagccatgaaccctgcggaag 280
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                                                                                                                                                                                                                                                                                                                                    by Bonaldo, Lennon and Soares,
                                                                                                      /clone_"UNL-P-FN-cy-f-02-0-UNL"
/clone_lib="UNL-P-FN"
                                                                                                                                                                                                                                                                                                                                                                                           ب
                                                                                                                                                                                                                                                                                                                                                                                         104
                                  /organism="Sus scrofa
                                                                                      /db_xref="taxon:9823"
                                                                                                                                                                                                                                                                                                                                                                       TAG_SEQ=None found"
171 c 165 g
Location/Qualifiers
                                                                                                                                         /dev_stage="ADULT"
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94.3%;
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Unpublished (1997)
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Matches 264; Conservative
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                  source
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AW211366
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ORIGIN
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1..501
/organism="Mus musculus"
/strain="129 c57/B6 - FVDN"
/db_xref="taxon:10090"
/clone="IMAGE:2648821"
/clone="IMAGE:264821"
/
                                       DNA Sequencing by: Washington University Genome Sequencing Center Clone distribution: NCI-GGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
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BI831943.1 GI:15943493
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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NIH-MGC http://mgc.nci.nih.gov/.
NIH-MGC http://mgc.nci.nih.gov/.
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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Pred. No. 5.6e-62;
0; Mismatches 20
                                                                                                                                                                                                                                                                                                                             Seq primer: -40RP from Gibco
High quality sequence stop: 427
Location/Qualifiers
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Contact: Smith TPL
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BI103329
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                                                                                                                                                                                                                                                                                         /note="Organ: brain; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT prined and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
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1 (bases 1 to 356)
Smith,T.P.L., Grosse,M.M., Freking,B.A., Roberts,A.J., Stone,R.T., Casas,E., Wray,J.E., White,J., Cho,J., Fahrenkrug,S.C., Bennett,G.L., Heaton,M.P., Laegreid,W.W., Rohrer,G.A., Chitko-McKown,C.G., Pertea,G., Holt,I., Karamycheva,S., Liang,F., Quackenbush,J. and
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cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov. a column: 20
High quality sequence start: 29
High quality sequence stop: 699.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 224.4; DB 10; Length
Pred. No. 5.9e-59;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19106 MARC 1BOV BOS taurus cDNA 5', mRNA sequence. AW326482 MW326482.1 GI:6762403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="IMAGE:5168539"
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/tissue_type="medulla"
/lab_host="DH108"
                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78.7%;
99.6%;
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Single pass sequencing. Bases called and trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 20 and -minmatch 12 options.

PCR PRimers
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 817)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from lymph node, ovary, fat, hypothalamus, and pituitary."
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Contact: Robert Strausberg, Ph.D.

Email: cgapbs-rémail.nih.gov

Tissue Procurement: Jeffreg E. Green, M.D.

CONA Library Preparation: Life Technologies, Inc.
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
T=E1: 402 762 4366
Fax: 402 762 4390
                                                                                                Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9913"
/clone_lib="MARC 1BOV"
                                                                                                                                                                                                                                                                                                                                                                                      /organism="Bos taurus"
                                                                                                                                                                                                                                                    BACKWARD: GTTTTCCCAGTCACGACG
Plate: 8 row: F column: 16
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                               FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                /db_xref="taxxn:10090"
/dlone="IMAGE:504992"
/clone="IMAGE:504992"
/clone="IMAGE:504992"
/lab_host="hluos (Tl phage-resistant)"
/lab_host="bridge (Tl phage-resistant)"
/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/note="organization" (Tl property organization orga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BM488747 546 bp mRNA linear EST 07-FEB-20. pgm2n.pk008.12 Normalized Chicken Breast Muscle, Leg Muscle, and Epiphyseal Growth Plate cDNA library (pgm2n) Gallus gallus cDNA clone pgm2n.pk008.12 5' similar to ref[XP_050766.1 (XM_050766) putative mitochondrial solute carrier [Homo saplens] gplAAK49519.1|AF327402_1 (AF327402) putative mitochondrial solute carrier are splice variant [Homo saplens] mKNA sequence.
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Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
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Cogburni.A. and Monsonego-Ornan,E.
ESTS from Normalized Chicken Breast Muscle, Leg Muscle, and
Epiphyseal Growth Plate cDNA library, USDA/IFAFS Animal Genome
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                        DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMI1120 row: 1 column: 09
High quality sequence stop: 777.
Location/Qualifiers
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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University of Delaware
                                                                                                                                                                                                                                                                                          /strain="FVB/N"
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Jev_stage="Breast.leg:Embryo(d19);post-hatch(ld,1,3,5,7,9,7lev_stage="Breast.leg:Embryo(d19);post-hatch)"

/lab.host="E. coli EMDH108"

/note="vector: pcWYSpORT6; Library made from equivalent pools of total RNA isolated from each tissue (embryonic muscle 33.3%; juvenile muscle 33.3%; and epiphyseal growth plate 33.3% of the final RNA pool). Single pass sequencing from 5'-end"
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602965377F1 NCI_CGAP_Lu33 Mus musculus CDNA clone IMAGE:5120755 5',
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                         Muscle,
                                                                                                                                                                                                                        /clone="pgm20.pk008.12"
/clone_lib="Normalized Chicken Breast Muscle, Leg Muscland Epiphyseal Growth Plate cDNA library (pgm2n)"
/sex="Male and Female"
/tissue_type="Breast muscle, leg muscle and epiphyseal
growth plate"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  277 CGCATCGTGCGTACCGAGGCCGTGTGGAGCCCATGCGGGGCCTGAACATCACCGCCACC 336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 aggattataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
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Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Gilbert Smith, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                         Ottawa Res. Centre
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Pred. No. 5.7e-50;
0; Mismatches 54; Indels
Lowingow 22-1-1335
Fax: 302-831-2822
Email: cogburn@udel.edu, www.chickest.udel.edu.
Location/Qualifiers
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/strain="Commercial broiler
Strains 90 & 21"
/db_xref="taxon:9031"
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80.78;
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Best Local Similarity 80.7'
Matches 226; Conservative
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM1294 row: j column: 20
High quality sequence start: 7
High quality sequence start: 7
High quality sequence stop: 809.
Location/Qualifiers
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                                                                                                                                        /organism="Mus musculus"
/strain="CZECH II"
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Best Local Similarity 90.6
Matches 260; Conservative
Bonaldo, Ph.D.
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Search completed: September 28, 2002, 06:22:49 Job time: 9190 sec

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Aj303078 Homo sapi
AL53319 Human DNA
AC096351 Human DNA
AC096351 Human DNA
AC093466 Homo sapi
AC093466 Homo sapi
AC018878 Mus muscu
AC108878 Mus muscu
AR216674 Homo sapi
AC015013 Homo sapi
AC01503 Homo sapi
AC02597 Homo sapi
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AC022597 Homo sapi
AC02267 Homo sapi
AC00268 Drosophil
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AF217402 Drosophil
AF217402 Drosophil
AF217402 Drosophil
AF217402 Drosophil
AF217402 Brassat
AP003615 Oryza sat
AP003615 Oryza sat
AP003615 Oryza sapi
AC069956 Mus muscu
AF125511 Homo sapi
AC69956 Mus muscu
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AC087150 Mus muscu
AF12551 Homo sapi
AC087150 Homo sapi
AC037522 Homo sapi
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AC037525 Homo sapi
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AF327402 Homo sapi
AJ303077 Homo sapi
AX071440 Sequence
AF327403 Homo sapi
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 1322)

Lal,P., Yang,J., Yue,H., Hillman,J.L., Tang,Y.T., Bandman,O.,

Burford,N., Baughn,M.R., Azimzai,Y., Lu,D.A., Au-Young,J. and

Patterson,C.
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Patent: WO 0078933-A 76 28-DEC-2000;
Incyte Genomics, Inc. (US)
Location/Qualifiers
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Sequence 76 from Patent W00078953.
AX061229 GI:12406365
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Copyright (c) 1993 - 2000 Compugen Ltd.
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Nikali K.;
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EAGACRPPVRQDPDSGPDYEALPAGATVTTHWVAGAVAGILEHCVMYPIDCVKTRWQS
LQPDPAARYRNVLEALWRIIRTEGLWRPMRGLNVTATGAGPAHALYFACYEKLKKTLS
                                                                                                                                                                                                                                                                                                                                                       PRI 02-MAY-2001
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Li.F., Nikali.K., Gregan, J., Leibiger, I., Leibiger, B., Schweyen, R.
Li.F., Nikali.K., Gregan, J., Leibiger, I., Leibiger, B., Schweyen, R.
Liasson, C. and Suomalainen, A.
Direct Submission
Submitted (08-DEC-2000) Human Molecular Genetics, National Public
Health Institute, Mennerheimintie 166, Helsinki 00300, Finland
Location/Qualifiers
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alternatively spliced"
/codon_start=1
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Homo sapiens putative mitochondrial solute carrier splice variant
mRNA, complete cds, alternatively spliced, nuclear gene for
anitochondrial product.
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(Dases I to 1448)

Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R., Larsson,C. and Suomalainen,A.

Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing
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                                                                                                                                                            61 aggattataagaacggagggcctatggaggcccatgaggggggttgaacgtcacagcaaca 120
                                                                                                                         Gaps
                                                                        1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                 ó;
         Length 1322;
                                 0; Indels
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        Score 280; DB 6; I Pred. No. 1.2e-81;
70.7%; Scot. 100.0%; Pred. No. 1... 0; Mismatches
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/db_xref="taxon:9606"
/chromosome="10"
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                                 280; Conservative
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                     Similarity
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         Query Match
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VERSION
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JOURNAL
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DVIHPGGNSHIANGAAGCVATLLHDAAMNPAEVVKQRMQMYNSPYHRVTDCVRAVWQN
EGAGAFYRSYTTGLTMNPPEQAIHFWTYEFLQEHFNPORRYNPSSHVLSGACAGAVAA
AATPLDDVCKTLLNTQESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIY
OLPGTALIANSVYEFFRYLLITRGESERAGK"
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Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li F., Nikali K., Gregan J., Leibiger I., Leibiger B., Schweyen R., Larsson C., Suomalainen A.; "Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing proteins 3 and 4"; FEBS Lett. 494:79-84(2001).
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ilarity 100.0%; Pred. No. 1.3e-81;
Conservative 0; Mismatches 0;
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(Rel. 67, Last updated, Version 2)
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/organism="Homo sapiens"
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es 280; Conserv
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ARNA linear PRI 02-MAY-2001 HOMO sapiens putative mitochondrial solute carrier splice variant mRNA, complete cds, alternatively spliced, nuclear gene for mitochondrial product.
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LTMNVPFQAIHEMTYEFLQEHFNPQRRYNPSSHYLSGACAGANAAATTPLDVCKTLL
NTGESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYE
FFKILITKRQBEWRAGK"
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Li,F., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R.
Larsson,C. and Suomalainen,A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="similar to mitochondrial RNA splicing protein 3/4;
alternatively spliced"
/codon_start=1
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1 (bases 1 to 1889)
Li,F.Y., Nikali,K., Gregan,J., Leibiger,I., Leibiger,B., Schweyen,R., Larsson,C. and Suomalainen,A.

Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
Submitted (08-DEC-2000) Human Molecular Genetics, National Public
Health Institute, Mennerheimintie 166, Helsinki 00300, Finland
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                                      9 GTCTACAGCCTGACCTGCCCGCTATCGCAATGTGTTGGAGGCCCTCTGGAGGATTA
                                                                                       taagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaacaggcgcag
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                     gtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctggaggatta
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FEBS Lett. 494 (1-2), 79-84 (2001)
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/db_xref="GI:13926050"
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/db_xref="taxon:9606"
/chromosome="10"
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                               /product="mitochondrial RNA splicing protein 3/4"
/function="putative mitochondrial solute carrier"
/protein_id="CAC27996.1"
/protein_id="CAC27996.1"
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HPGGNSHIANGAAGCVATLLHDAAWNPARCAGPAHALYFACYERKKWLSDVI
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LDVCKTLLNTQDSLALMSHITGHITGHAGMASAFRTVXQVGGVTAYFRGVQARVIYQIPSTA
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Milliams, L.T., Escobedo, J., Innis, M.A., Garcia, P.D., Klinger, J., Kassam, A., Raihard, C., Raddazzo, F., Kennedy, G.C., Pot, D., Lamson, G., Drmanac, R., Crkenjakov, R., Drmanac, S., Dickson, M., Hanan, Genes and gene expression products

Patent: WO 0102568-A 1912 11-JAN-2001;
CHIRON CORPORATION (US); HYSEQ, INC. (US)
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100.0%; Pred. No. 2.1e-79;
tive 0; Mismatches 0;
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/db_xref="taxon:9606"
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                  /gene="HMRS3/4"
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Best Local Similarity 100.
Matches 273; Conservative
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Best Local Similarity
Matches 280; Conserv
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Length 1889

Score 225; DB 17;

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TMNVPFQAIHFMTYEFLQEHFNPQRRYNPSSHVLSGACAGAVAAAATTPLDVCKTLLNT
QESLALNSHITGHITGMASAFRTVYQVGGVTAYFRGVQARVIYQIPSTAIAWSVYEFFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi, Mammalia,
Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (12-DEC-2000) to the EMBL/GenBank/DDBJ databases.
Nikali K., Human Molecular Genetics, National Public Health Institute,
Mannerheimintie 166, Helsinki, FI-00300, FINLAND.
                                             Li F., Nikali K., Gregan J., Leibiger I., Leibiger B., Schweyen R., Larsson C., Suomalainen A.;
"Characterization of a novel human putative mitochondrial transporter homologous to the yeast mitochondrial RNA splicing proteins 3 and 4";
FEBS Lett. 494:79-84(2001).
                                                                                                aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
                                                                                                                                               ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
                                                                                                                                                            mRNA for mitochondrial RNA splicing protein 3/4 (HMRS3/4
                        Gaps
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/function="putative mitochondrial solute carrier"
/protein_id="CAC27997.1"
                        ;
                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                HMRS3/4 gene; mitochondrial RNA splicing protein 3/4
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            2.5e-63;
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                        Mismatches
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1032. .1565
            Pred. No.
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100.08; PL
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/gene="HMRS3/4"
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(Rel. 67, Last upd
                        Matches 225; Conservative
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            Best Local Similarity
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26-APR-2001
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Nikali K.;
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Ramsay. H.

Direct Submission

Direct Submission

Direct Submission

Submitted (25-SEP-2001) Sanger Centre, Hinxton, Cambridgeshire,

CB10 15A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone
requests: clonereques/@sanger.ac.uk

On Sep 26, 2001 this sequence version replaced gi:14280413.

During sequence assembly data is compared from overlapping clone
Where differences are found these are annotated as variations
together with a note of the overlapping clone name. Note that the
variation annotation may not be found in the sequence submission

Corresponding to the overlapping clone, as we submit sequences with
only a small overlap as described above.

This sequence was finished as follows unless otherwise noted: all
regions were either double-stranded or sequenced with an alternate
chemistry or covered by high quality data (i.e., phred quality >-
30); an attempt was made to resolve all sequencing problems, such
one plasmid subclone or more than one M13 subclone; and the
assembly was confirmed by restriction digest. The following
abbreviations are used to associate primary accession numbers given
in the feature table with their source databases: Em:, EMBL; SW:,
SWISSPROT; Tr:, TREMBL; WP:, WORMPEP; information on the WORMPEP

Hat Direct Subclone or work of the source databases: Em:, EMBL; SW:
Adatabase can be found a we.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human DNA sequence from clone RP11-85A1 on chromosome 10, complete sequence. AL353719 AC007643
HUS53719.10 GI:15787725
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The true left end of clone RPI1-85A1 is at 1 in this sequence. The true left end of clone RPI1-85A1 is at 1236f1 in this sequence. The true right end of clone RPI1-129J12 is at 51589 in this
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
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                                                                                                                                                                            aggattataagaacggaggcctatggaggcccatgagggggggctgaacgtcacagcaaca 120
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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56.0%;
100.0%; Pie
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25; Conservative
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Worley, K.C.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus chromosome Rfl clone CH230-24M6, WORKING DRAFT SEQUENCE, 33 unordered pieces.
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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/clone="RPI1-85A1"
/clone_lib="RPCI-11.1"
complement(7066. .7118)
/note="Single clone region. Sequence from reads from a
short insert library derived from a single pUC clone.
Restriction digest data confirm the assembly."
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100.0%; Pred. No. 5.1e-63;
ive 0; Mismatches 0;
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                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
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HTG: HTGS_PHASE1; HTGS_DRAFT.
Location/Qualifiers
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Best Local Similarity 100.
Matches 225; Conservative
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Martinez, Massey, B., Mawhiney, E., McLeod, M. P., Meador, M., Martinez, E., Massey, B., Mawhiney, E., McLeod, M. P., Meador, M., Merike, M., Merzker, M., Miner, G., Mitchell, T., Mohabbat, K., Morgan, M., Morris, S., Moser, M., Newtson, J., Newtson, J., Newtson, N., Nguyen, A., Nguyen, N., Nigher, P., Newtson, S., Nguyen, N., Nguyen, N., Ordanye, P., Pickens, P., Parch, M., Parce, L., Peters, L., Pickens, R., Parch, M., L.L., Detery, J., Peters, L., Pickens, R., Primus, E., Pu, L. L., Quiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Ran, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Sisson, I., Sodergren, E., Sonalke, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svatek, A., Taylor, P., Taylor, T., Telfrod, B., Thomas, N., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Usmani, K., Vasquez, L., Verra, V., Villalon, D., Vinson, R., Wall, R., Wang, S., Ward-Moore, S., Warren, R., Washington, C., Walliams, G., Williamson, A., Wleczyk, R., Wooden, S., Walliams, G., Walliamson, A., Walczyk, R., Wooden, S., Walliams, G., Williamson, A., Zorrilla, S., Nelson, D., Weinstock, G. and Gibbs, R.
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* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a "working draft" sequence. It currently

* Consists of 33 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N. but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On Dec 20, 2001 this sequence version replaced gi:15627972.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Consensus quality: 200164 bases at least Q40
Consensus quality: 205303 bases at least Q30
Consensus quality: 209366 bases at least Q30
Estimated insert size: 209880; sum-of-contigs estimation
Quality coverage: Ox in Q20 bases; agarose-fp estimation
Quality coverage: 3.9x in Q20 bases; sum-of-contigs estimation
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Loulseged, H., Lozado, R.J., Lu, X., Lucier, A., Lucier, R.,
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Contact: hgsc-help@bcm.tmc.edu
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/product="mitochondrial solute carrier-like protein"
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                                                                                    ROD 27-OCT-2001
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                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                            Submitted (20-JUL-2000) Pathology, University of Florida, 1600 SW Archer Road, Rm. D6-15, Gainesville, FL 32610, USA Location/Qualifiers
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                                                                                                                                                                                                                                           A new gene which is highly expressed in NOD mice spleen Unpublished
                                                                                                                                                                                                                                                                                       Li,Q.-Z., Shi,J.-D., Cruz,P., Echenrode,S., Ruan,Q.-G. Wang,C.-Y.
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/db_xref="taxon:10090"
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GRLSGMANAFRTVYQLNGLPATSKASRRVSSTRCPPPPFLGLSMSSSSTFSPSASWKI
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                                                                                                                                 Homo sapiens
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

[ bases 1 to 1429]
                                                                                                                                                                                                                                                                         Song, H., Gao,G., Peng, Y., Ren,S., Chen,Z. and Han,Z.
Direct Submission
Submitted (12-JAN-2000) Chinese National Human Genome Center at
Shanghai, 351 Guo Shoujing Road, Zhangjiang Hi-Tech Park, Pudong,
Shanghai 201203, China
Location/Qualifiers
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Homo sapiens HT015 protein (HT015) mRNA, complete cds.
AF223466
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Pred. No. 4.1e-31;
0; Mismatches 95; Indels
                                                                                                                                                                                                       Song, H., Gao, G., Peng, Y., Ren, S., Chen, Z. and Han, Z. A novel gene expressed in human hypothalamus
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/tissue_type="hypothalamus"
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/protein_id="AAF64141.1"
/db_xref="G1:7578783"
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Best Local Similarity 66.1%;
Matches 185; Conservative (
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RESULT 1 AC099368

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E. [bases 1 to 163205)

Burdy, D.M., Adams, C., Adio-Oduola, B., All-Osman, F.R., Allan, C., Alabray, D.M., Adams, C., Adio-Oduola, B., All-Osman, F.R., Allan, C., Alabray, D.B., Banks, T., Barbaria, J., Blande, S., Blandenburg, K., Bonnin, D., Bouck, J., Burdy, D.B., Burch, P., Burdy, D., Cavazos, S.R., Chack, J., Chenger, C., Carter, M., Cavazos, S.R., Chack, J., Cherland, C.D., Cox, C., Coyle, M. D., Dathorne, S.R., Darid, R., Davila, M.L., Davis, C., Cox, Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M. D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Bordy, J., Dugan-Rocha, S., Durbin, H.H., Douthwaite, R.J., Draper, H., Dugan-Rocha, S., Durbin, H.H., Douthwaite, R.J., Draper, H., Brander, C., Edhari, C., Escotto, M., Fall, R., Gord, J., Foster, P., Frantz, P., Erantz, P., Errantz, P., Errantz, P., Harris, C., Harris, R., Gao, J., Garcia, A., Garrer, T., Gotzer, P., Frantz, P., Harris, C., Harris, R., Harr
ACUYY368 163205 bp DNA linear HTG 20-DEC-2001 Rattus norvegicus clone CH230-84611, *** SEQUENCING IN PROGRESS ***, 71 unordered pieces.
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On Dec 20, 2001 this sequence version replaced gi:16901901.
                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
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Center code: BCM
Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
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Rattus norvegicus
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Direct Submission
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                                                                   NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html). NOTE: This is a 'working draft' sequence. It currently consists of 71 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
Consensus quality: 146548 bases at least Q20
Estimated insert size: 120308; sum-of-contigs estimation
Quality coverage: 0x in Q20 bases; agarose-fp estimation
Quality coverage: 1.9x in Q20 bases; sum-of-contigs estimation
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AC108878 191702 bp DNA linear HTG 06-FEB-2002
Mus musculus clone RP23-256H24 strain C57BL6/J, *** SEQUENCING IN
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e.html
                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. I toases 1 to 191702)
Grills,G., Li,L., Montgomery,K.T., Brown,W.A., Chiu,D., Decker,J., Fusina,M., Haider,A., Keller,A., Perera,A., Shim,C., Thomas,E., High Throughput Mouse Sequencing Kucherlapati,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (01-FBB-2002) Harvard Partners Center for Genetics and Genomics, Harvard Medical School, 65 Landsdowne St, Cambridge, MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Estimated insert size: agarose-FP - N/A
**Estimated insert size: 191382 - sum-of-contigs
Quality coverage: agrose-FP - N/A
Quality coverage: 5.6 x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grills,G., Li,L., Montgomery,K.T., Brown,W.A., Chiu,D., Decker,
Fusina,M., Haider,A., Keller,A., Perera,A., Shim,C., Thomas,E.,
Zencheck,W., Xi,C., Juels,P. and Kucherlapati,R.
Direct Submission
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On Feb 6, 2002 this sequence version replaced gi:18464039.
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Sequencing vector: pUC18; L08752
Chemistry: Dye-terminator Big Dye; 1008
*Consensus quality: 187211 at least 020
*Consensus quality: 185727 at least 030
*Consensus quality: 183181 at least 030
*Consensus quality: 183181 at least 040
Estimated insert size: agarose-FP - N/A
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                                                                PROGRESS ***, 17 unordered pieces.
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                                                                                               AC108878
                                 DEFINITION
                                                                                                                                                                                                              ORGANISM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="WELREGVGNQAAGRRMDGDCRDGGCGSKDAGSEDYENLPTSAS
VSTHWTAGAMAGILEHSIMYPVDSVKTRMQSLNPDPKARYTSIYGALKRIMHTEGFWR
PLRGLNVMMMGAGPAHAMYFACYENWKRTLNDVFSHQGNSHLANGILKAFVWSWEALL
                                                                                                                                    Joby bp mRNA linear ROD 07-NOV-2001 mus musculus mitochondrial carrier-like protein mRNA, complete cds; AF361699
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 5869)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A novel mouse mitochondrial carrier protein gene is up-regulated from young to adult NOD mice Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
Submitted (15-MAR-2001) Department of Pathology, Immunology and
Laboratory Sciences, University of Florida, 1600 SW Archer Road,
Room D6-15, Gainesville, FL 32610, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2 (bases 1 to 5869)
Li,Q., Eckenrode,S., Wang,C., Ruan,Q., Shi,J., McIndoe,R.A. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
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/product="micochondrial carrier-like protein"
/protein_id="AAL27990.1"
/db_xref="G1:1675528"
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Pred. No. 5.9e-25;
0; Mismatches 72; Indels
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116. .664
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1427 c 1390 g 16
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/chromosome="14"
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68.08;
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/note="MCLP"
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Query Match

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BASE COUNT ORIGIN

RESULT 13 AC108878

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arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                          Sequencing vector: Mi3; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
Assembly program: Phrap; version 0.990329
Consensus quality: 81772 bases at least Q40
Consensus quality: 95159 bases at least Q30
Consensus quality: 100612 bases at least Q30
Ouality coverage: 3,95 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                  * NOTE: This is a 'working draft' sequence. It currently * consists of 16 contigs. The true order of the pieces * is not known and their order in this sequence record is
Web site: http://genome.imb-jena.de/
Contact: gscj-submit@genome.imb-jena.de
------ Project Information
                                                              Center project name: H241
Center clone name: RP1-158P13
                                                                                                        ----- Summary Statistics
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Schilhabel,M.B. Baumgart,C., Blechschmidt,K., Dette,M., Jahn,N., Lehmann,R., Menzel,U., Polley,A., Reichwald,K., Schudy,A., Siadiquii,R., Taudien,S., Wen,G., Schlegelberger,B., Siebert,R., Chromosome 8 genomic sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DD 106283 ATGCAGAGTTTGAATCCAGATCCCAAAGCCCGGTATACAAGCATCTATGGCGCCCTCAAG 106342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Colley, A. Wen, G. Baumgart, C., Dette, M., Jahn, N., Schilhabel, M., Menzel, U. and Rosenthal, A.
Direct Submission
Submitted (15-DEC-1999) Genome Analysis, Institute of Molecular Botechnology, Beutenbergstrasse 11, Jena 07745, Germany On Jun 2, 2001 this sequence version replaced 9::8151796.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aggattataagaacggagggcctatggaggcccatgagggggctgaacgtcacagcaaca 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27.7%; Score 109.8; DB 2; Length 191702; 68.0%; Pred. No. 1.1e-24;
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                        in length
                                                                in length
                                                                                                        188416: contig of 2003 bp in length
188436: gap of unknown length
                                                                                                                                                                                            190648: contig of 1044 bp in length
190668: gap of unknown length
191702: contig of 1034 bp in length
                                                                                                                                                                                                                                         bp in length
                                                                                                                                                       bp in length
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Center code: IMB
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                                              length
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                                                              contig of 2398
gap of unknown
                                                                                                                                                    189584: contig of 1148
189604: gap of unknown
                   contig of 1367
gap of unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                       /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                             /db_xref="taxon:10090"
/clone="RP23-256H24"
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                                                                                                                                                                                                                                                               Location/Qualifiers
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                      183975:
                                                                186393:
                                                                                    186413:
                                                                                                                                                                                                                                                                                                                                                                                           /sex="male"
182608:
                                            183995:
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Matches 153; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26.5%; Score 105; DB 2; Length 108765; 66.7%; Pred. No. 3.8e-23; ive 0; Mismatches 75; Indels 0;
contig of 1101 bp in length gap of unknown length contig of 19938 bp in length gap of unknown length contig of 19938 bp in length gap of unknown length contig of 19800 bp in length gap of unknown length gap of unknown length contig of 8177 bp in length gap of unknown length gap of unknown length contig of 8177 bp in length gap of unknown length
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contig of 3246 b
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/db_xref="taxon:9606"
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                                                                                                                                                                                                                                                               Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                   165 gttaaaaaaagacattgagtgatgtaatccaccctggggggcaatagccatattgccaatgg 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
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Ishikawa,K., Asai,S., Takahashi,Y., Nagata,T. and Ishii,Y. Mathod for examining ischemic conditions
Patent: WO 0188188-A 1009 22-NOV-2001;
School Juridical Person Nihon University (JP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 104.8; DB 6; Length 483;
Pred. No. 1.8e-23;
0; Mismatches 7; Indels 0.
                                                                                       DNA
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Seguence 1009 from Patent WO0188188.
AX306258
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Job time: 14925 sec
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/organism="Mus musculus"
/db_xref="taxon:10090"
a 139 c 121 g 96
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Best Local Similarity 94.0%;
Matches 109; Conservative (
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                        GenCore version 4.5
Copyright (c) 1993 - 2000. Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1736436 seqs, 858457221 residues
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Gapop 10.0 , Gapext 1.0
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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ption	ORFX ORF398	polynucleoti	transport pr	uncoupling p	Novel human polynu	polynuclecti	secreted pro	immune/haema	immune/haema
Description	Human	Human	Нишаи	Human	Novel	Human	Human	Human	Human
ID	AAC74843	AA160661	AAF27733	AAC90457	AAF66156	AAI58875	AAS03906	AAK69779	AAK73320
DB	21	22	22	21	22	22	22	22	22
Query Match Length DB ID	1418				401			•	•
% Query Match	71.0	70.7	70.7	70.7	68.8	68.7	56.8	56.8	56.8
Score	281	280	280	280	273	272	225	225	225
Result No.	٦	°	ю	4	2	9	7	80	6

31-MAR-2000; 2000WO-US08621.

WO200058473-A2. Homo sapiens.

05-0CT-2000

	10	174	43.9	339	22	AAK58672	Human immune/haema
	11	129.6	32.7	1902	22	AAK52172	polynucleot
	13	128	32.3	1716	27	AAC77189	Human OPEX OPE2744
	14	128	32.3	2562	22	AAH90057	bone marrow
	15	121	30.6	300	20	AAZ13026	gene
	16	121	30.6	710	20	AAZ15876	
	17	107.6	27.2	1913	22	AAH89944 **********************************	bone
	10	105	26.5	842	22	AAK93895	
	20	105	26.5	1814	22	AAK94871	
	21	105	26.5	2837	22	AAK80493	immune/hae
	77	104.8	2.02	1000	7.4	AB1998/1	
	24	103.4	26.1	3028	22	AAC91320	Human polynicleoti
	25	101.8	25.7	1468	21	AAC77175	Human ORFX ORF2730
	56	101	25.5	622	22	AAK91764	
	27	101	25.5	622	22	AAK93200	cDNA clon
	200	91.4	23.1	1758	202	AAV845/3	Human secreted pro
	30	4. LV	1.62	2037	77	ABA83330 AAS62787	CONA Secreted pro
	31	42.2	10.7	2137	23	ABI,08627	Drosophila melanog
	32	37.4	9.4	8211	22	AAK80490	Human immune/haema
	33	35	8.8	3842	22	AAS44972	ncod
O	٣	34.4	8.7	6712	21	AAC76691	Human ORFX ORF2246
	35	34	8.6	673	21	AAF12614	Aspergillus oryzae
	36	33.6	8.5	1371	21	AAC47438	Arabidopsis thalia
	37	33.6	8.5	1373	21	AAC39502	Arabidopsis thalia
O	m i	33.6	8.5	11800	22	AAK82152	Human immune/haema
	99	33.2	8.4	1227	23	AAS81309	DNA encoding novel
	40	32.4	8 6	1311	8 6	AAT68957	Blackcurrant pRIB7
•	4 -	32.4	20.0	5150	8 6	AAT68952	Blackcurrant fruit
0 0	4 <	32.4	7. c	9220	2 5	ABLU8626	Drosophila melanog
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υ	4	35	8.1	1363	20	AAX60283	
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A	AAC7	74843	standard;	; cdna;	141	8 BP.	
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X		Human OKFX	OKE398	polynuci	-	eotide sequence SEQ 1D NO:/9	95.
KW		nan; open	readi	ng fram		frame; ORFX; detection; cytostatic;	c; hepatotropic;
KW		vulnerary; antipsoriatic;	antips	oriatic			otective
X.		ticonvuls	ant; o	steopat	hic;	osteopathic; antiarthritic; immunosuppressant;	pressant; cardiant;
XX.		immunostimulant;	lant;	thrombo	lyti	c; coagulant; vasotropic;	antidiabetic;
K X		potensive Fiviral:	s; derm	atologi	cat;	immunosuppressive; antil tifungal: antirbenmatic:	nilammatory; antithuroid:
K		tianaemic	:: dene	therap	; Ö	uncivilation; antibacterial, antifungal; antifuedumatic; anticulional antifued disorder; hyperto	dicituly1014; rder: hypertension:
KW		urodegene	rative	disord	er;	Osteoarthritis; graft vs	
KW	-	rdiovascu	ılar di:	sease;	diab	cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;	dism; SCID; AIDS;
X.		cholesterol ester storage;	ester	storage	6	systemic lupus erythematosus; infection	
N I		vere comp	lined 1	mmunode	1101	ency; malaria; autoimmune	disorder; asthma;
K		tergy; ap	TASCIC	anaemia; ilago dam	ים: מים מים	Stic anaemia; nocturnal naemogiobinuria; bur Gartilago damago: antiinflammator: diooso:	burn; wound;
K Y		bone damage; calli thrombosis: contra	contra	calliage dam	21114y	е; апсілпіташмасогу цізеа s.	se; coagulation;
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(first entry)

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Human; nootropic; immunosuppressant; cytostatic; gene therapy; cance: peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-Drager Syndrome; chemotactic; chemokinetic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel nucleic acids and polypeptides, useful for treating disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 4650; 10078pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               such as central nervous system injuries
                                                             Human polynucleotide SEQ ID NO 4650.
                                                                                                                                                                                                                                                                                                         26-DEC-2000; 2000WO-US34263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P-PSDB; AAM41505
                                                                                                                                                                                                                                        WO200153312-A1
                                                                                                                                                                            leukaemia; ss
                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                   19-OCT-2000;
29-NOV-2000;
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                               22-OCT-2001
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AAI60661;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Wang
Zhao
 ..
                                                                                                                                                                                                                                                                                                 AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX aguences have activities such as: cytostatic; hepatotropic; vulnerary; antiparkinsonian; nootropic; immunosuppressant; immunosuppressant; anticonvulsant; antiarthritic; immunosuppressant; antidabetic; hypotensive; dermatological; immunosuppressive; antidifiabetic; hypotensive; dermatological; immunosuppressive; antidifiabetic; hypotensive; dermatological; antifungal; antitheumatic; antithrianatory; antibacterial; antiviral; antifungal; antithreumatic; antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORFX-associated disorder nucleic acids can be used to express ORFX proteins in gene therapy execuses. The proteins and nucleic acids may be used to treat cancers,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupus erythematosus, severe combined immunodeficiency (SCID), AIDS, viral, bacterial or fungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, nocturnal haemoglobinuria, antiinflammatory disease; to enhance
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       178 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg 237
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                                                                                                                                                                                                      Novel nucleic acids and peptides derived from open reading useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 1418 BP; 353 A; 400 C; 368 G; 297 T; 0 other;
                                                                                                                                                                                                                                                                      5; Page 853-854; 5507pp; English.
           31-MAR-1999; 99US-0127607.
02-APR-1999; 99US-0127636.
05-APR-1999; 99US-0127728.
30-MAR-2000; 2000US-0540763.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           281; Conservative
                                                                                                                          Shimkets RA, Leach M;
                                                                                           (CURA-) CURAGEN CORP
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                                                                                                                                                         WPI; 2000-602362/57
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Ö

Wang

Ren F,

Zhang J;

Yang Y,

Chen R, Ma Y, Xu C, Xue AJ, R, Drmanac RT;

Wehrman T, X Goodrich R,

Liu C, P Wang Z, W

OA,

2001-442253/47

Asundi V,

2000US-0488725. 2000US-0552317. 2000US-0598042. 2000US-0620312.

2000US-0653450. 2000US-0662191. 2000US-0693036. 2000US-0727344.

Qian XB,

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                                                                                                                        in gene therapy. A composition containing a polypeptide or polynucleotide of the invention may be used to treat diseases of the peripheral nervous system, such as peripheral nervous injuries, peripheral neuropathy and localised neuropathies and central nervous system diseases, such as Albahamer's, parkinson's disease, Huntingfon's disease, amyotrophic lateral sclerosis, and Shy-Drager Syndrome. Other uses include the utilisation of the activities such as: Immune system suppression,
The invention relates to human nucleic acids (AAI57798-AAI61369) and the encoded polypeptides (AAM38642-AAM42213) with nootropic, immunosuppressant and cytostatic activity. The polynucleotides are useful
                                                                                                                                                                                                                                                                                                                                                                                                                     Activin/inhibin activity, chemotactic/chemokinetic activity, haemostatic and thrombolytic activity, cancer diagnosis and therapy, drug screening, assays for receptor activity, arthritis and inflammation, leukaemias and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence data for this patent did not form part of the printed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1134 ATGCAGAGTCTACAGCCTGACCCAGCTGCCCGCTATCGCAATGTGTTGGAGGCCCTCTGG 1075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61 aggattataagaacggaggcctatggaggcccatgaggggggttgaacgtcacagcaaca 120
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70.7%; Score 280; DB 22; 100.0%; Pred. No. 6.1e-85;
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Matches 280; Conserv
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gcaacattacttcatgatgcagccatgaaccctgcggaagg 281

AAI60661 standard; cDNA; 1294 BP

AAI60661/c ID AAI606 XX

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 present invention provides the protein and coding sequences for 43 sl human transport proteins (designated TPPTs). These can be used in diagnosis and treatment of transport, metabolic, neurological, roductive, cardiovascular and immune disorders, and cell proliferative.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; transport protein; TPPT; transport disorder; metabolic disorder; neurological disorder; cardiovascular disorder; reproductive disorder; immune disorder; cancer; ss.
                                1015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated polypeptide with a human transport protein sequence is useful for the diagnosis, prevention and treatment of disorders associated with the immune, reproductive and cardiovascular systems -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ż
                                                                                                                                                                                                                                           895
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agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
                                                                                                                                                                                                                  ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg
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Patterson C;
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                                                                                                                                                                                                                                                                                         Human transport protein TPPT-33 coding sequence.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 5; Page 160; 165pp; English
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99US-0148177.
99US-0149357.
99US-0162287.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
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P-PSDB; AAB60113.
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10-AUG-1999;
18-AUG-1999;
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antirheumatic; antiproliferative; cardiant; vasotropic; cerebroprotective, neuroprotective, antibacterial; opthalmological; gastrointestinal; nephrotropic; gynaecological; vulnerary; thrombolytic; gene therapy; cancer; wound; infectious disease; thrombosis; arthritis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  encoding uncoupling proteins. The nucleotide sequences may be used for the detection of various disorders such as cancer, for chromosome identification, as chromosome markers and for numerous other diagnostic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or research purposes. The uncoupling protein encoded by the nucleotide sequences may be used to treat disorders such as neural, immune, muscular, reproductive, gastrointestinal, pulmonary, cardiovascular, renal and proliferative disorders, wounds, infectious diseases, thrombosis, arthritis, and infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is one of eighteen isolated nucleotide sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Uncoupling proteins and nucleic acid sequences encoding them, usefu for detecting, preventing and treating proliferative, neurological, immune system, cardiovascular and gastrointestinal disorders -
                                               agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
                                                                                                                                                                                                                                                                                                                                                            Human; uncoupling protein; immunosuppressive; antiarthritic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DR;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 306-307; 343pp; English.
                                                                                                                                                                                                                                                                                                                            Human uncoupling protein cDNA #6.
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9
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99US-0149448.
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                                                                                                                                                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                           infertility; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200061614-A2.
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18-AUG-1999;
12-NOV-1999;
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             306
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Gaps 9

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Indels

DB 22; I 6.2e-85; hes 0;

Score 280; DB Pred. No. 6.26 0; Mismatches

70.7%; Sc.\_ 100.0%; Pre 0;

Matches 280; Conservative

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Similarity

Query Match Best Local S

Length 1322;

1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kassam A;
                                                                                         197 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg 256
                                                                                                                                                                               180
                                                                                                                                                                                            aggattataagaacggaggcctatggaggcccatgagggggctgaacgtcacagcaaca 316
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                                      Gaps
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Kennedy GC, Pot D, Lamson G, Drmanac R;
Dickson M, Labat I, Leshkowitiz D;
LW, Strache-Crain B;
                                                                atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                                                                                                        aggattataagaacggaaggcctatggaggcccatgagggggctgaacgtcacagcaaca
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Or
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library of polynucleotides for diagnosing a cancerous state of mammalian cell and detecting cancer, particularly of the colon prostate, comprises 3351 human polynucleotide sequences -
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        Length 1336;
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6.2e-85;
hes 0;
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                                    Mismatches
          Score 280;
Pred. No.
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70.7%; Scc.
100.0%; Pre/
0; N
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, Drmanac S,
                                      Conservative
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                         Similarity
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Reinhard C, 1
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02-JUL-1999;
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           Query Match
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                                    Matches
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their gene products are used as genetic or biochemical markers (e.g. in blood or tissues) that will detect the earliest changes along the carcinogenesis pathway and/or monitor the efficacy of therapies and preventive interventions. The polynucleotides, polypeptides and antibodies against them can be used in pharmaceutical compositions to treat the cancers and proliferative disorders such as neoplasia, dysplasia and hyperplasia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; nootropic; immunosuppressant; cytostatic; gene therapy; cancer; peripheral nervous system; neuropathy; central nervous system; CNS; Alzheimer's; Parkinson's disease; Huntington's disease; haemostatic; amyotrophic lateral sclerosis; Shy-brager Syndrome; chemotactic; chemotactic; thrombolytic; drug screening; arthritis; inflammation;
                                                                                                                                                                                                                                                         ggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaaagacattgagtgatg 187
                                                                                                                                                                                                                                                                                                                          taatccaccctgggggcaatagccatattgccaatggtgcgggccgggtgtgtggcaacat 247
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                                                                                                                    Sequence 401 BP; 100 A; 104 C; 120 G; 76 T; 1 other;
                                                                                                                                                         Score 273; DB 22;
Pred. No. 8.2e-83;
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                                                                                                                                                 68.9%; Sco...
100.0%; Pred. No. c...
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2000US-0552317.
2000US-0598042.
2000US-0653450.
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2000US-0653450.
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                                                                                                                                                        Query Match 68.9
Best Local Similarity 100.
Matches 273; Conservative
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14-SEP-2000;
19-OCT-2000;
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WO200123598-A1. Homo sapiens.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human secreted protein; autoimmune disorder; hyperproliferative disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                 Note: The sequence data for this patent did not form part of the printed specification.
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   Wang
                                                                                                               Novel nucleic acids and polypeptides, useful for treating disorders
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                  Zhang J;
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Pred. No. 3.3e-82;
0; Mismatches 5; Indels 0
Qian XB,
Yang Y,
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Wehrman T, Xu C, Xue AJ,
Goodrich R, Drmanac RT;
                                                                                                                                                             SEQ ID NO 1078; 10078pp; English.
                                                                                                                                such as central nervous system injuries
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Best Local Similarity 98.2%;
Matches 275; Conservative C
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                                                                WPI; 2001-442253/47.
Liu C,
Wang Z,
                                 Zhou P,
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Sequences AASO3873-AASO3922 represent isolated nucleic acid molecules and PCR primers of the invention. acid of the invention. Secreted proteins and their related nucleic acids can be used in the diagnosis of or susceptibility to a pathological condition by determining the presence or amount of absence of a mutation in a nucleic acid or the presence or amount of expression of a secreted protein. The sequences are used to prevent, treat or ameliorate a medical condition in e.g. humans, mice, rabbits, goats, horses, cats, dogs, chickens or sheep. The antibodies to the disorders and in diagnostic immunossays e.g. radioimmunoassays or enzyme disorders and in diagnostic immunossays e.g. radioimmunoassays or enzyme disorders and in diagnostic immunossays e.g. radioimmunoassays or enzyme close immunosorbent assays (ELISA). The disorders include autoimmune disease e.g. rheumatoid arthritis, hyperproliferative disorders e.g. cardiovascular disorders e.g. cardioxascular disorders e.g. cardiac arrest, cardioxascular disorders e.g. cardiac arrest, cardioxascular disorders e.g. cardiac cardioxascular disorders e.g. corneal infection. The peptides can also be used to aid wound healing and epithelial cell proliferation, to help prevent skin ageing due to sunburn, to maintain corgans before transplantation, to regenerate tissues, in chemotraxis and as a food additive or preservative to alter storage capabilities.
                                                                                                                                                                                                                                                                                                                                                                                                   useful
                                                                                                                                                                                                                                                                                                                                                                                                Forty one nucleic acid molecules encoding human secreted proteins, useful the prevention, treatment and diagnosis of cancer, immune disorders, cardiovascular disorders and neurological diseases
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P-PSDB; AAU01950, AAU01989.
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    Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ds.
                                        Human immune/haematopoietic antigen genomic sequence SEQ ID NO:24591
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             (first entry)
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    antion acid sequences given in AAMB1921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) activity, and can be used in gene therapy and vaccine production. (I) cytotesias and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) capplement the patients own production of (I). Additionally, (I) to protein any be used to produce the secreted (I), by inserting the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially concern and cancer metastases of haematopoietic antigen genomic sequences from the present invention. AAKS4942 to AAKS4950 and AAMS2169 represent sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis -
                                                                                                                                                                                                                                                                                                       AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
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                                                                                                                                                                                                                                                                        Disclosure; SEQ ID NO 24591; 3071pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 27960 BP; 7998 A; 5835 C; 6583 G; 7544 T; 0 other;
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                                                                                                                                              Ruben SM,
                                                                                                               (HUMA-) HUMAN GENOME SCI INC.
                               08-DEC-2000; 2000US-0251989.
08-DEC-2000; 2000US-0251990.
11-DEC-2000; 2000US-0254097.
05-JAN-2001; 2001US-0259678.
 2000US-0251868.
2000US-0251869.
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Matches 225; Conservative
                                                                                                                                              Barash SC,
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08-DEC-2000; 208-DEC-2000; 208-DEC-2000; 208-DEC-2000; 211-DEC-2000; 2
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29-SEP-2000;
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amino acid sequences given in AAM91921. (I) have cytostatic activity, and can be used in gene therapy and vaccine production. (I) crotains and polynocleotides may be used in the prevention. (I) treatment of diseases associated with inappropriate (I) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (I) by expressing inactive proteins or to supplement the patients own production of (I). Additionally, (I) polynucleotides may be used to produce the secreted (I), by inserting polynucleotides may be used to produce the secreted (I), by inserting the nucleic acids into a host cell and culturing the cell to express the protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-derived cells. AAK64703 to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK84942 to AAK87695 and AAM82169 represent invention. AAK84942 to AAK87695 and AAM82169
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding human immune/hematopoietic antigen polypeptides, useful for preventing, diagnosing and/or treating cancers and metastasis -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; immune; haematopoietic; immune/haematopoietic antigen; cancer; cytostatic; gene therapy; vaccine; metastasis; ss.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0; Gaps
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                                                                                                                                                                                          Disclosure; SEQ ID NO 28132; 3071pp + Sequence Listing; English.
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(HUMA-) HUMAN GENOME SCI INC
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Best Local Similarity 100.0
Matches 225; Conservative
                                        Rosen CA, Barash SC,
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P-PSDB; AAM85891.
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05-JAN-2001;
    2000US-0179065.
2000US-0186628.
2000US-01866360.
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2000US-0198123.
2000US-0214886.
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2000US-0229287.
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2000US-0230438.
2000US-0231242.
2000US-0231243.
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2000US-0234223.
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2000US-0234997.
2000US-0234998.
  2001WO-US01354
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                                        31-JAN-2000;

44-FEB-2000;

16-MAR-2000;

16-MAR-2000;

18-MAR-2000;

19-MAY-2000;

19-MAY-2000;

10-JUL-2000;

28-JUN-2000;

28-JUN-2000;

28-JUN-2000;

28-JUN-2000;

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Ruben SM; 2000US-0246532. 2000US-0246609. 2000US-0246610. 2000US-0246611. 2000US-0246613. 2000US-0250160 2000US-0250180 2000US-0251988 2000US-025198 2000US-0251856 2000US-0251856 2000US-0251869 2000US-0251869 2000US-0251869 2000US-0251869 2000US-0249208. 2000US-0249209. 2000US-0249210. 2000US-0249211. 2000US-0249212. 2000US-0249213. 2000US-0249214. SCI INC 2000US-0249244. 2000US-0249245. 2000US-0249264. 2000US-0249216 2000US-0249217 2000US-0249265 (HUMA-) HUMAN GENOME Rosen CA, Barash SC,

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                                                                                                                       amino acid sequences given in AAM82170 to AAM91921. (1) have cytostatic activity, and can be used in gene therapy and vaccine production. (1) proteins and polynucleotides may be used in the prevention, diagnosis and treatment of diseases associated with inappropriate (1) expression. For example, they may be used to treat disorders associated with decreased expression by rectifying mutations or deletions in a patient's genome that affect the activity of (1) by expressing inactive proteins or to supplement the patients own production of (1). Additionally, (1) polynucleotides may be used to produce the secreted (1), by inserting the nucleic acids into a host cell and culturing the cell to express the
                                                                                                                                                                                                                                                                                                          protein. (I) proteins and polynucleotides may be used to prevent, diagnose and treat immune/haematopoietic-related diseases, especially cancers and cancer metastases of haematopoietic-derived cells. AAK64703 to AAK87694 represent human immune/haematopoietic antigen genomic sequences from the present invention. AAK54942 to AAK54950 and AAM82169 represent sequences used in the exemplification of the present invention.
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encoding human immune/hematopoietic antigen polypeptides, eventing, diagnosing and/or treating cancers and
                                                                                                            AAK54951 to AAK64702 encode the human immune/haematopoietic antigen (I)
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                                                                      Claim 1; SEQ ID NO 3732; 3071pp + Sequence Listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 339 BP; 86 A; 84 C; 101 G; 64 T; 4 other;
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Pred. No. 4.5e-49;
1; Mismatches 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human polynucleotide SEQ ID NO 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAK52172 standard; cDNA; 1902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43.9%;
94.9%;
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2000US-0560875.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
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Best Local Similarity 94.9
Matches 188; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            useful for preventing,
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 acids
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27-APR-2000;
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                                  metastasis -
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                                                                                                                                                                                                                                                                                                                                                     encoded polypeptides (AAM/8233-AAM80002) that exhibit activity elating to cytokine, cell proliferation or cell differentiation or which may induce production of other cytokines in other cell populations. The polypeptides are useful in gene therapy, vaccines or peptide therapy. The polypeptides have various cytokine-like activities, e.g. stem cell growth factor activity, haematopoiesis regulating activity, tissue growth factor activity, immunomodulatory activity and activity inhibin activity and may be useful in the diagnosis and/or treatment of cancer, leukaemia, nervous system disorders, arthritis and inflammation.
                                                                                                                                              Ma Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note: Records for SEQ ID NO 2110 (AAK52581), 2111 (AAK52582) and 3666 (AAM80020) are omitted as the relevant pages from the sequence listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1458 aatgacgttttccaccaccaaggaaacagccacctagccaacgggatagctgggagtatg 1517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1398 ggtgcagggccagcccatgccatgtattttgcctgctatgaaaacatgaaaaggacttta 1457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
                                                                                                                                                                                                                                                                                                                                           invention relates to polynucleotides (AAK51456-AAK53435) and the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
                                                                                                                                                                                                                                                          Nucleic acids encoding polypeptides with cytokine-like activities,
                                                                                                                                                          Wang 2W;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 22; Length 1902;
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0
                                                                                                                                            ', Asundi V, Zhou P, Xu C,
Zhang J, Ren F, Chen R, Wa
', Goodrich R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human mitochondrial solute carrier protein hMSC-o cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1902 BP; 434 A; 532 C; 547 G; 389 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1518 gecaecetgetecacgatgeggtaatgaatecageagaag 1557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94;
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66.4%; Pred. No. 1.6e-33;
tive 0; Mismatches 94.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241 gcaacattacttcatgatgcagccatgaacctgcggaag
                                                                                                                                                                                                                                                                                                          Claim 1; Page 2450-2452; 6221pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         were missing at the time of publication
                                                                                                                                                                                                                                                                             in diagnosis and gene therapy
                                                                                                                                                               Wang J, Zh
Wejhrman T,
                                                                                                                                              Drmanac RT,
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                                          2000US-0663561.
2000US-0693325.
2000US-0728422.
            2000US-0620325.
2000US-0654936.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 66.4
Matches 186; Conservative
                                                                                                                                                                                                            2001-476283/51.
                                                                                                                                            Liu C, |
Wang D,
Yang Y, |
                                                                                                             (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                             P-PSDB; AAM79039
            19-JUL-2000;
01-SEP-2000;
                                          15-SEP-2000;
20-OCT-2000;
                                                                             30-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            04-MAY-2001
                                                                                                                                            Tang YT,
Zhao QA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF59920;
                                                                                                                                                                               Xue AJ,
                                                                                                                                                                                                                                                                             useful
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antidiabetic;

coagulant; vasotropic;

Immunostimulant; thrombolytic;

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anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         231
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                                                                          New human mitochondrion solute carrier protein and its nucleic acid
                                                                                                                                                                                                                                                                                                                                                                   The invention relates to a novel human mitochondrial solute carrier
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agtgatgtaatccaccctggggggaatagccatattgccaatggtgcggccgggtgtgtg
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             carrier protein; hMSC-o; hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.3%; Score 128; DB 22; Length 1305;
larity 66.1%; Pred. No. 4.5e-33;
Conservative 0; Mismatches 95; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human ORFX ORF2744 polynucleotide sequence SEQ ID NO:5487.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1305 BP; 292 A; 388 C; 363 G; 262 T; 0 other;
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                                                                                                                                             17-MAR-2000; 2000CN-0114958
                                                                                                                                                                        17-MAR-2000; 2000CN-0114958
             solute
            Human mitochondrial solute preparation; detection; ss
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                                                                                                                                                                                                                                  Xiao
                                                                                                                                                                                                                                                              2001-050544/07.
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ses 185; Conserv
                                                                                                                                                                                                                                  Gao X,
                                                                                                                                                                                                                                                              WPI; 2001-050544/
P-PSDB; AAB60658
                                                       Homo sapiens
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                                                                                                                                                                                                                                  Zhang X,
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AAC7446 to AAC77606 encode the proteins given in AAB40237 to AAB43397, which represent the human ORFX open reading frames 1 to 3161. The ORFX sequences have activities such as: cytostatic; hepatoricopic; vulnerary; antiparkinsonian; nootropic; neuroprotective; costeopathic; anticonvulsant; antiarthitic; immunosuppressant; immunostimulant; cardiant; thrombolytic; coagulant; vasotropic; antidiabetic; hypotensive; dermatological; immunosuppressive; antidiabetic; hypotensive; dermatological; immunosuppressive; antidiabetic; hypotensive; dermatological; antifungal; antirheumatic; antithyroid; and antianaemic. The sequences can be used for determining the presence of or predisposition to, or preventing or treating pathological conditions associated with an ORFX-associated disorder. The nucleic acids can be used to express ORFX proteins in gene therapy vectors. The proteins and nucleic acids may be used to treat cancers, proliferative disorders, neurodegenerative disorders, osteoarthritis, graft vs host disease, cardiovascular disease, diabetes mellitus, hypertension, hypothyroidism, cholesterol ester storage, systemic lupus cartinal naematosus, severe combined immunodefichency (SCID), AIDS, viral, bacterial or ifungal infection, malaria, autoimmune disorders, asthma, allergies, aplastic anaemia, burns, wounds, bone and cartilage damage, conversed to the control of the c
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                                                                                 hypertension;
                   hypotensive; dermatological; immunosuppressive; antiinfilmmatory; antivitual; antibacterial; antifundatio; antinfundatio; antithorial; antibacterial; antipromatic; antithyroid; antianaemic; gene therapy; cancer; proliferative disorder; hypertension; neurodegenerative disorder; osteoarthritis; graft vs host disease; cardiovascular disease; diabetese mellitus; hypothyroidism; SCID; AIDS; cholesterol ester storage; systemic lupus erythematosus; infection; severe combined immunodeficiency; malaria; autoimmune disorder; asthma; allergy; aplastic anemnia; nocturnal haemoglobinuria; burn; wound; bone damage; cartilage damage; antiinflammatory disease; coagulation; thrombosis; contraceptive; antiinflammatory disease; coagulation;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      frame X,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel nucleic acids and peptides derived from open reading
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     coagulation; to inhibit thrombosis; and as a contraceptive.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            useful for treating e.g. cancers, proliferative disorders, neurodegenerative disorders and cardiovascular disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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Pred. No. 5.2e-33;
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99US-0127636.
99US-0127728.
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66.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Leach M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (CURA-) CURAGEN CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-602362/57.
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                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  31-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shimkets RA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-APR-1999;
05-APR-1999;
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                      495
 aaaatcatgcggaccgaaggcttctggaggcccttgcgaggcgtcaacgtcatgatcatg 375
                                                                                                                                                                                                                                                                                               Human; bone marrow; antiinflammatory; cytostatic; neuroprotective; antiviral; antibacterial; antifungal; anti-HIV; hæmostatic; immunosuppressive; gene therapy; cytokine cell proliferation; cell differentiation modulator; immune disorder; infection; cancer; human immunodeficiency virus; HIV; autoimmune disorder; haemophilia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel bone-marrow-expressed polynucleotides and polypeptides, useful for treating e.g. cancer and immune deficiency disorders –
                                                                                         436 aatgacgttttccaccaccaaggaaacagccacctagccaacgggatagctgggagtatg
                                                                      181 agtgatgtaatccaccctggggggaatagccatattgccaatggtgggggggtgtgtg
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Xu C, Xue AJ, Yang Y, Zhang J;
                                                                                                                   280
                                                                                                                                          496 gccaccctgctccacgatgcggtaatgaatccagcagaag 535
                                                                                                                     gcaacattacttcatgatgcagccatgaaccctgcggaag
                                                                                                                                                                                                                                                                           Human bone marrow cDNA, SEQ ID NO: 301.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; Page 412-413; 648pp; English
                                                                                                                                                                                                       AAH90057 standard; cDNA; 2562 BP
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Zhao QA, Zhou P, Drmanac RT;
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2000us-0662191.
2000us-0693036.
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2000US-0552317.
2000US-0598042.
2000US-0620312.
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09-JUL-2000;
19-JUL-2000;
03-AUG-2000;
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19-OCT-2000; 3
30-NOV-2000; 2
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or more types of cancer. The polynucleotide and polypeptide can used as nutritional sources or supplements and in the screening chemical compounds as potential drugs.
                                                                                                                                                                                                                                ;
                                                                                                                                                                              Length 2562;
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                                                                                                                                                                           32.3%; Score 128; DB 22;
Similarity 66.1%; Pred. No. 6.4e-33;
35; Conservative 0; Mismatches 95;
                                                                                                       Sequence 2562 BP; 623 A; 660 C;
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98US-0072910.
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31-MAR-1998;
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Claim 1; Page 774; 2479pp; English.
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The present invention describes a library of human polynucleotides

comprising the sequences given in AA212532 to AA21779. Also described is

a method of detecting differentially expressed genes correlated with the

cancerous state of a mammalian cell, comprising detecting at least one

differentially expressed gene product in a test sample from a cell

suspected of being cancerous, where the gene product is encoded by one

of the 5248 polynucleotide sequences given in AA212532 to AA21779. The

colynucleotides can be used as a source of primers and probes, which can

be used for a variety of purpose, e.g. detection of expression levels,

can be used for raising antibodies for experimental, diagnostic and

detection of polymorphisms. Polypeptides encoded by the polynucleotides

can be used for raising antibodies for experimental, diagnostic and

therapeutic purposes. The polynucleotides may also be used to construct

arrays for diagnostics (which may be used to determine function of an

cenceded protein); and to detect differences in expression levels between

two cells (e.g. to identify abnormal or diseased tissue in a human, to

identify a genetic predisposition or susceptibility to a disease such as

cancer). The polynucleotides of the invention are especially used in the

diagnosis, prognosis and management of colorectal cancer, breast cancer,

continued and an analysis of an also be used to screen for peptide analogues and antagonists. 

Sequence 300 BP; 83 A; 76 C; 79 G; 62 T; 0 other;

; 0 Gaps 0; Query Match 30.6%; Score 121; DB 20; Length 300; Best Local Similarity 100.0%; Pred. No. 5.2e-31; Matches 121; Conservative 0; Mismatches 0; Indels (

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SEQUENCE CHARACTERISTICS:
LENGTH: 1311 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
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MOLECTLE TYPE: CDNA
HYPOTHETICAL: NO
NITI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Ribes nig
STRAIN: Ben Alder
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3: /cgg_2_6/ptodata/2/ina/6A_COMB.seg:*
4: /cgn2_6/ptodata/2/ina/pcTUS_COMB.seg:*
5: /cgg_2_6/ptodata/2/ina/pcTUS_COMB.seg:*
6: /cgn2_6/ptodata/2/ina/pcTUS_COMB.seg:*
GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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US-09-068-140A-14
US-09-033-150C-68
US-09-234-613-68
US-08-676-974-2
US-08-676-974-2
US-09-058-487-3
US-08-676-974-2
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US-08-686-878A-5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS SOFTWARE: FASTSEQ for Windows Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: 0S/08/933,750C
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APPLICANT: Hillman, Jennifer L.
APPLICANT: Bandman, Olga
APPLICANT: Shah, Purvi
APPLICANT: Yue, Henry
APPLICANT: Yue, Henry
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: HUMAN REGULATY
NUMBER OF SEQUENCES: 98
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           September 23, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
ATTORNEY AGENT INFORMATION:
NAME: Billings, Lucy J.
REGISTRATION NUMBER: 36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
                                                                                                                                                                                                                 3511 AGGAGACTTTTTCTCATG 3528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
                                                                                                                                                                       170 aaaagacattgagtgatg 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1643 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEX:
INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LIBRARY: SYNOOAT01
CLONE: 724157
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                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Lal, P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: line IMMEDIATE SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94304
                                                                                                                                                                                                                                                                                                     US-08-933-750C-68
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US-08-933-750C-68
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0
                                                                                                            50 aggccctctggaggattataagaacggagggcctatggaggcccatgagggggctgaacg 109
                                                                                                                                                                                             110 tcacagcaacaggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaa 169
                                                                                                                                                                                                                      227 AAGCCCTTGGGTCGATACTGAAAGTTGAAGGTCCCGCCGGACTTTACCGTGGCATTGGTG 286
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                        Length 1311;
                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 19406-0939
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
APPLICATION NUMBER: US/09/068,140A
                                                                                                                                                                                                                                                                                                                                                                                                    US-09-068-140A-14
Sequence 14, Application US/09068140A
Sequence 14, Application US/09068140A
GENERAL INFORMATION:
APPLICANT: Mary Rose Woodhead, Mark Andrew Taylor
APPLICANT: and Rex Michael Brennan
TITLE OF INVENTION: Blackcurrant Promoters and Genes
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
                                                                  99
                      Score 32.4; DB 4;
Pred. No. 0.19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E: SmithKline Beecham Corporation 709 Swedeland Road
                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/EP96/04807
FILING DATE: NO. 6281409ember 4, 1996
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Dinner, Dara L.
RECISTRATION NUMBER: 33,680
REFERENCE/DOCKET NUMBER: C70237
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5017
TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA (genomic)
                        8.2%;
                                                                                                                                                                                                                                                                                                              347 AGGAGACTTTTCTCATG 364
                                                                                                                                                                                                                                                                                 170 aaaagacattgagtgatg 187
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SEQUENCE CHARACTERISTICS:
LENGTH: 5150 base pairs
TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Ribes nigrum
                                       Best Local Similarity 52.2
Matches 72; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 709 Swedeland
CITY: King of Prussia
STATE: PA
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US-09-068-140A-14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION:
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Best Local Simmatches 72;
                          Query Match
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86 ggaggcccatgaggggctgaacgtcacagcaacaggcgcagggcctgcccacgccctt 145
                                      542 GGACCCTCTGGAGCGGCCTCCCCGCCACCTGGTGATGACTGTGCCAGCTACCGCCATCT 601
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               146 attttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatccaccctgggggca 205
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/676,967
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7.6%; Score 30.2; DB 1; 27.4%; Pred. No. 1.5; iive 50; Mismatches 162;
                                                                                                                                                                                                                                                                                                                                                     E: Science & Technology Law Group
268 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                Human Telomerase
10
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                            US-08-676-967-2
; Sequence 2, Application US/08676967
; Setent No. 5747317
; GENERAL INFORMATION:
; APPLICARY: COLLINS, KATHLEEN
; TITLE OF INVENTION:
NUMBER OF SEQUENCES: 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Osman Ph.D., Richard A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: UCB9
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (415)343-4342
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (415)343-4341
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                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                       STREET: 268 Bush stracture: San Francisco
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      94104
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                                                                                                                                                                                                                                                                                                                                                                                                                  CA
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                                    86 ggaggcccatgagggggctgaacgtcacagcaacaggcgcagggcctgcccacgcccttt 145
482 CTACCCGCTTCACTGGCACCATGGATGCCTTCGTGAAGATCGTGAGGCACGAGGGCACCA 541
                                                                         542 GGACCCTCTGGAGGGGCCTCCCCGCCACCTGGTGATGACTGTGCCAGCTACCGCCATCT 601
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                                                                                                                                        146 attttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatcc 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HUMAN REGULATORY MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
OPERATING SYSTEM: DOS
OPTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/234,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 32; DB 3;
Pred. No. 0.29;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: Incyte Pharmaceuticals, Inc
3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF-0356 US
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APPLICATION NUMBER: US/08/933,7'
FILING DATE: September 23, 1997
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                   Sequence 68, Application US/09234613
Patent No. 6132973
                                                                                                                                                                                                                                                                                                            Lal, Preeti
Hillman, Jennifer L.
Bandman, Olga
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Billings, Lucy J. REGISTRATION NUMBER: 36,749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER: PF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-855-0555
TELERAX: 415-845-4166
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Yue, Henry
APPLICANT: Guegler, Karl J.
APPLICANT: Corley, Neil C.
TITLE OF INVENTION: HUMAN REG
NUMBER OF SEQUENCES: 98
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                         Shah, Purvi
Au-Young, Janice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 49.4%;
Matches 83; Conservative (
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MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
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SEQUENCE CHARACTERISTICS:
LENGTH: 1643 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: nucleic acid
STRANDEDNESS: sing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMMEDIATE SOURCE:
LIBRARY: SYNOOAT01
CLONE: 724157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: Palo Alto
STATE: CA
                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
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APPLICANT:
APPLICANT:
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US-09-234-613-68
                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
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COLLINS, Kathleen

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APPLICANT:
                                                                                                                                                                                 COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  503 GNAARGCNYTNAARGGNATGAAYATGAARGARATHAARGGNMGNACNGTNGCNGTNGAYT 562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              146 attttgcctgctacgaaaagttaaaaaagacattgagtgatgtaatccaccctgggggca 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       563 GGCCNGTNGCNAARGAYAARTAYAARGAYACNCARWSNGTNWSNGCNATHGGNGARGARA 622
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 7.6%; Score 30.2; DB 1; Length 2 Best Local Similarity 27.4%; Pred. No. 1.5; Matches 80; Conservative 50; Mismatches 162; Indels
                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/676,974
                                                                                                                                                                                                                                            ADDRESSEE: Science & Technology Law Group
STREET: 268 Bush Street, Suite 3200
CITY: San Francisco
                                                                                                                                                    APPLICANT: COLLINS, KATHLEEN
TITLE OF INVENTION: Human Telomerase
NUMBER OF SEQUENCES: 10
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: UCB96-055
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; Sequence 2, Application US/09098487; Patent No. 5917025
; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Osman Ph.D., Richard A
REGISTRATION NUMBER: 36,627
                                                                                    Sequence 2, Application US/08676974
Patent No. 5770422
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (415)343-4342
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (415)343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LENGTH: 2277 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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US-08-676-974-2
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US-09-098-487-2
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APPLICANT: HOFFWAN, NO. 6309820h
APPLICANT: KAY, Brian K.
APPLICANT: FOWLKES, Dana M.
APPLICANT: FOWLKES, Dana M.
TITLE OF INVENTION: POLYPEPTIDES HAVING A FUNCTIONAL
TITLE OF INVENTION: DOMAIN OF INTEREST AND METHODS OF IDENTIFYING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 503 GNAARGCUYTNAARGGNATGAAYATGAARGARATHAARGGNMGNACNGTNGCNGTNGAYT 562
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             266 tgaaccctgcggaaggtaatgattcctcaacctatcactctgtgggcagctgcacctgta 325
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                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/098,487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 7.6%; Score 30.2; DB 2; Best Local Similarity 27.4%; Pred. No. 1.5; Matches 80; Conservative 50; Mismatches 162;
TITLE OF INVENTION: Human Telomerase
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Science & Technology Law Group
STREET: 268 Bush Street, Suite 3200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UCB96-055
                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence 33, Application US/08630915A; Patent No. 6309820
GENERAL INFORMATION:
APPLICANT: SPARKS, Andrew B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Osman Ph.D., Richard A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: UCB9
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (415)343-4341
TELEFAX: (415)343-4342
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2277 base pairs
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STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                    San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                        94104
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/983,926
FILING DATE: 01-DEC-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/829,141
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APPLICATION NUMBER: US/08/202,389
FILING DATE: 28-FEB-1994
CLASSIFICATION: 435
                                                                                                                                                          FILING DATE: 7 Jun 1995
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Perryman, David G.
REGISTRATION NUMBER: 33,438
REFRENCE/POCKET NUMBER: 1414
TELECOMMUNICATION INFORMATION:
TELEPHONE: 404/688-9770
TELEPHONE: 404/688-9880
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Patent No. 5536636
      IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHRACTERISTICS: LENGTH: 5532 base pairs TYPE: nucleic acid STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear MOLECULE TYPE: DNA (genomic)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61; Conservative
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NAME/KEY:
; LOCATION:
US-08-475-035-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: MA
      COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-202-389-1
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APPLICANT: KING, C. R.
APPLICANT: KRAUS, MATHIAS H.
APPLICANT: KRAUS, MATHIAS H.
APPLICANT: BY STURE A.
TITLE OF INVENTION: HUMAN GENE RELATED TO BUT DISTINCT FROM TITLE OF INVENTION: EGF RECEPTOR GENE
NUMBER OF SEQUENCES: 4
CORRESONDENCE ADDRESS:
ADDRESSEE: NEEDLE & ROSENBERG, P.C.
STREET: Suite 1200, 127 Peachtree Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64; Indels
                                                                                                                                                                                                                                                                                                                            MCDIUM IIEE. FALGEY ALES.

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/630,915A
FILING DATE: 03-APR-1996
CLASSIFICATION: 536
ATTORNEY AGENT INFORMATION:
NAME: Misrock, S. Leslie
REGISTRATION NUMBER: 1101-174
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF SECTION OF SECT
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Best Local Similarity 51.5%; Pred. No. 3.2;
Matches 68; Conservative 0; Mismatches
                                                                                            1E: Pennie & Edmonds LLP
1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 3, Application US/08475035 Patent No. 5985553
   USING SAME
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                                                                                                                                                                                                                                                                                                                  Floppy disk
                                                                                                                                                    CITY: New York
STATE: New York
COUNTRY: USA
ZIP: 10036-2711
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Atlanta
STATE: Georgia
COUNTRY: USA
ZIP: 30303
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 4091 bases
TYPE: nucleic acid
STRANDEDNESS: single
                          NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1115 CTCCCGCACACC 1126
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TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: DNA
                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-630-915A-33
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                                                                                                                         STREET:
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258 tgcagccatgaaccctgcggaaggtaatgattcctcaacctatcactctgtgggcagctg 317
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4665 ACATTGGATTCATCAGCATTTGGACCAATAGCCCACAGCTGAGAATGTGGAATA 4718
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     318 cacctgtattttttacagtttgcagaagaaagcacatcagttttggtgggaaa 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 5532;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 53; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Freeman Jr., Robert M.
APPLICANT: Plutzky, Jorge
APPLICANT: Neel, Benjamin G.
APPLICANT: Rosenberg, Robert D.
TITLE OF INVENTION: IDENTIFICATION OF NOVEL TYROSINE
TITLE OF INVENTION: PHOSPHATASES HAVING SH2 DOMAINS
NUMBER OF SEQUENCES: 54
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hamilton, Brook, Smith & Reynolds, P.C.
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: 0S/08/475,035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATIS: SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 29.2; DB
Pred. No. 5.2;
0; Mismatches
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100 gggctgaacgtcacagcaacaggcgcagggcctgcccacgccctttattttgcctgctac 159
                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                             ;
0
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                                                                                                                                                                                                                                                               Score 29; DB 4; Length 8600; Pred. No. 7.7; 0; Mismatches 35; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
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30.7%; Pred. No. 3.9;
tive 25; Mismatches 70;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
OPERATING SYSTEM: DOS
CUSTUARRE: FastSED for Windows Version 2.0
CUSTENT APPLICATION DATA:
APPLICATION NUMBER: US/09/073,569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Sheppard, Paul O.
APPLICANT: Grossmann, Angelika
TITLE OF INVENTION: NOVEL TUMOR ANTIGENS
NUMBER OF SEQUENCES: 15
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: ZymoGenetics, Inc.
STREET: 1201 Eastlake Avenue East
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7690 CTACAGACAAAGCTTAATCAAGTG 7666
                                                                                                                                                                                                                                                                                                                                                                                                                                          160 gaaaagttaaaaaagacattgagtg 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE:
ATTORNEY AGENT INFORMATION:
NAME: Sawislak, Deborah A
REGISTRATION NUMBER: 37,438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/09073569
Patent No. 6084088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ,25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 97-
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                   7.3%;
58.8%;
             INFORMATION FOR SEQ ID NO: 1:
                                 SEQUENCE CHARACTERISTICS:
LENGTH: 8600 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH: 1311 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 7.28
Best Local Similarity 30.78
Matches 42; Conservative
                                                                                                                                                                                                                                                                   Query Match 7.3
Best Local Similarity 58.8
Matches 50; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 206-442-6678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                            TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
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CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    USA
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                                                                                                                                                      HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98102
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US-09-457-708-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-073-569-4/C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
US-09-073-569-4
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0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Kwiatkowski, David J.
APPLICANT: Sampson, Julian R.
APPLICANT: Sampson, Julian R.
APPLICANT: Povey, Sugetenhorst, Marjon
APPLICANT: Halley, Dicky
TITLE OF INVENTION: Compositions and Methods Based U
TITLE OF INVENTION: Sclerosis-1 (TSC-1) Gene and Gene Product
NUMBER OF SEQUENCES: 28
CORRESPONDENCE ADDRESS:
ADDRESSE: Vinson & Elkins
STREET: 1455 Pennsylvania Avenue, N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 29; DB 1; Length 1747; Pred. No. 3.3; 0; Mismatches 40; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: U.S.

ZIP: 20004-1008

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PARENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/457,708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Sanzo, Michael A.
REGISTRATION NUMBER: 36,912
REFERENCE/DOCKET NUMBER: BRI331/42002
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1NFORMATION:
TELEPHONE: (202) 639-6585
TELEFAX: (202) 639-6604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  156 ctacgaaaagttaaaaaagacattgagtgatgt 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165 AGAGTCTCAGCCAACCTGGTGTTTTGTGTCTT 197
FILING DATE: 31-JAN-1992
PRIOR APPLICATION DATA:
PELLING DATE: 26-UNH-1991
FILING DATE: 26-UNH-1991
ATTORNEY AGENT INFORMATION:
NAME: Granahan, Patritia
REGISTRATION NUMBER: 32,227
REFERENCE/DOCKET NUMBER: B1H92-05MA
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 861-6540
INFORMATION FOR ESD ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 1747 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: Linear
MOMECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1, Application US/09457708
Patent No. 6326483
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 7.3%;
Best Local Similarity 57.0%;
Matches 53; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
2..1540
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                                                                                                                                                                                                                                                                                                                                                                                                                 ; NAME/KEY:
; LOCATION:
US-08-202-389-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
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64 attataagaacggagggcctatggaggcccatgagggggctgaacgtcacagca 117
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
0
                                                                                                                             Sequence 6, Application US/08026138E
Patent No. 5502166
GENERAL INFORMATION:
APPLICANT: Masayoshi MISHINA
TITLE OF INVENTION:
NUMBER OF SEQUENCES: 19
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 7.2%; Score 28.4; DB 1; Length 4446; Local Similarity 70.4%; Pred. No. 8.8; nes 38; Conservative 0; Mismatches 16; Indels 0
                                                                                                                                                                                                                                                                                                                                                                    6: FROM 1 to 4446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE TYPE: brain
PUBLICATION INFORMATION:
AUTHORS: Masayoshi MISHINA
ITLE: NOVEL PROTEINS AND GENES CODING THE SAME
RELEYANT RESIDUES IN SEQ ID NO: 6: FROM I to 444
US-08-026-138E-6
                                                                                                                                                                                                                                                         ADDRESSEE: Nishiohata Residence 1-107
STREET: 5214, Nishiohata-machi
CITY: Niigata-shi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Hamburg, C.Bruce
REGISTRATION NUMBER: 22,389
REFERENCE/DOCKET NUMBER: F-4551
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 986-2340
TELEPAX: (212) 986-2340
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 4446 nucleic acids
TYPE: nucleic acid
STRANDEDNESS: double strand
                                                                                                                                                                                                                                                                                                                STATE: Nijgata-ken
COUNTRY: JAPAN
ZIP: 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: O
                                                                                           RESULT 14
US-08-026-138E-6/C
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US-09-268-163-9/c
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                                                                     170 aaaagacattgagtgatgtaatccaccctgggggcaatagccatattgccaatggtgcgg 229
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                     ö
                                                                                                                                                                                                                                                      13-08-026-138E-17/c

| Sequence 17, Application US/08026138E
| Patent No. 550216016
| GENERAL INFORMATION:
| APPLICANT: Masayoshi MISHINA
| TITLE OF INVENTION: NOVEL PROTEINS AND GENES CODING THE SAME
| CORRESPONDENCE ADDRESS:
| ADDRESSEE: Nishtohata Residence 1-107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7.2%; Score 28.4; DB 1; Length 4368; 70.4%; Pred. No. 8.7; tive 0; Mismatches 16; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 951
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44 MB storage
COMPUTER: IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TITLE: NOVEL PROTEINS AND GENES CODING THE SAME; RELEVANT RESIDUES IN SEQ ID NO: 17: FROM 1 to 43 US-08-026-138E-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:

PAPLICATION NUMBER: US/08/026,138E
FILING DATE: 26-FEB-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1P 39563/1992
FILING DATE: 30-JW-1992
APPLICATION NUMBER: JP 173155/1992
FILING DATE: 30-JW-1992
APPLICATION NUMBER: JP 215017/1992
FILING DATE: 12-AUG-1992
APPLICATION NUMBER: JP 303878/1992
FILING DATE: 13-NOV-1992
ATTORNEY/AGENT INFORMATION:
NAME: Hamburg, C.Bruce
REGISTRATION NUMBER: 2,389
REFERENCE/DOCKET NUMBER: P-4551
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION 1NFORMATION:
TELECOMMUNICATION 1NFORMATION:
TELEPHONE: (212) 986-2340
TELEFRAX: (212) 953-7733
INFORMATION FOR SEO ID NO: 17:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Nishiohata Residence 1-107
STREET: 5214, Nishiohata-machi
CITY: Nilgata-shi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: MS-DOS v.5
SOFTWARE: Word Perfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 4368 nucleic acids
TYPE: nucleic acid
STRANDEDNESS: double strand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM: mouse
TISSUE TYPE: brain
PUBLICATION INFORMATION:
AUTHORS: Masayoshi MISHINA
                                                                                                                                                                            506 CCNCCNCKNARNCK 490
                                                                                                                                               290 cctcaacctatcactct 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 7.2
Best Local Similarity 70.4
Matches 38; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: Nijgata-ken
COUNTRY: JAPAN
ZIP: 951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
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Gaps

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Sequence 9, Application US/09268163B
Patent No. 6353091
GENERAL INFORMATION:
APPLICANT: Lipscombe, Diane
APPLICANT: Lipscombe, Diane
APPLICANT: Lipscombe, Diane
TITLE OF INVENTION: HUMAN N-TYPE CALCIUM CHANNEL ISOFORM AND USES THEREOF
FILE REFERENCE: B1055/7000
CURRENT APPLICATION NUMBER: US/09/268,163B
CURRENT FILING DATE: 1999-03-12
EARLIER APPLICATION NUMBER: US 60/077,901
FEARLIER FILING DATE: 1999-03-13
NUMBER OF SEQ ID NOS: 28
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 9
LENGTH: 7011
TYPE: DNA
ORGANISM: Ratus norvegicus
FEATURE:
NAME/KEY: CDS
LOCATION: 1..7008
US-09-268-163-9
Ouery Match
Ouery Match
Best Local Similarity 54.3%; Pred: No. 13;
Matches 57; Conservative 0; Mismatches 48; Indels 0; Gaps 0;
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Search completed: September 28, 2002, 07:56:08 Job time: 11253 sec

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Run on:

Sequence:

Minimum DB Maximum DB

Database

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AK015770 Mus muscu
B1757180 603028871
B403523 B4095232
B4012200 B4012200
AW120205 B152b03.y
A1133696 HA2320 Hu
B1831750 603079016
                                                                                                                                                                                                                                                                                   A1310713 q087q12.x
A1630395 ad09f01.y
B1460337 603201993
BC777404 602664685
AK006155 Mus muscu
B1449976 dac76f09.
                                                                                                                                                                                                                                                                                                                                                                                   BB644566 BB644566
BG895490 358967 MA
AA061624 mj90h11.r
AZ693917 AST-2HLB2
                                                           AV704087 AV704087
B1448355 dac73b07
AL654963 AL654963
AA104365 mp01906.r
BE014800 12651 MA
A1942584 fc73c03.y
BB654057 BB654057
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B1827322 74-OCT-2001
603077989F1 NIH_MGC_119 Homo sapiens cDNA clone IMAGE:5169694 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Organ: brain; Vector: pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed); RNA source normal medulla from anonymous male age 27. Library is oligo-dT primed and directionally cloned (EcoRV site is destroyed upon cloning). Average insert size 1.3 kb, insert size range
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 747)
NIH-MGC http://mgc.nci.nih.gov/.
National institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapDs-remail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can if Clone distribution: MGC clone distribution information can http://image.llnl.gov
Plate: LLAMI1422 row: a column: 23
High quality sequence stop: 743.
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/lab_host="DH10B"
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B1757180
BJ035232
BJ012200
AW210205
AI33696
AI33696
AI310713
AI630395
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BG777404
AK006155
B1449976
BB644566
BG895490
AA061624
BE012485
BI854643
BI854643
BI935051
BJ039504
AV704087
BI44835
AL654963
AA104365
BE014800
AI94284
BB6544057
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BI827322.1 GI:15938872
 mRNA sequence.
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B1045863 MR3-FN020
B1541703 455541 MA
BE913718 601669072
BG964218 60282826
B1794616 1692602.y
B1185580 UNL.-P-FN-AW211366 uo80b.07.y
B181943 603076873
B181943 603076873
B181943 602068838
BM488747 pgmZn.pk0
BF916224 CMZ-UT0111
BF916224 CMZ-UT0111
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                GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
                                                                                                                                                                                                                                                                                    13736207 seqs, 6748477542 residues
                                                                                                                                                                                                                                                                                                                 Total number of hits satisfying chosen parameters:
                                                                                                           September 28, 2002, 06:22:49
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Maximum Match 100%
Listing first 45 summaries
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B1541703
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em_gss_pln:*
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2246.4
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222.3
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195.4
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195.4
196.4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALS30804 LTI_NFL001_NBC4 Homo sapiens cDNA clone CSODD008YH17 5 ALS30804
0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NHMGC Library." I others
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1 (bases 1 to 888)

Li,W.B., Gruber,C., Jessee,J. and Polayes,D.

Full-length cDNA libraries and normalization

Unpublished (2001)
                                                                                                                                                                                                                                           ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaagacattg 180
                                                                                                                                                                                                                                                                                                                                                                   204 GCCCCAGGCCCTGCCCACGCCCTTTATTTTGCCTGCTACGAAAAGTTAAAAAAGACATTG 263
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BP 191 91006 EVRY cedex - France
Emall: segref@genoscope.cns.fr, Web : www.genoscope.cns.fr.
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                                                                                                                          Length 747;
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Pred. No. 6.2e-78;
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                                                                                                                        70.7%; Score 280; DB
100.0%; Pred. No. 6.2
:ive 0; Mismatches
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Matches 280; Conservative
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases I to 480) Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soarce, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
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//db_xxef="texon:9606"
//clone_lib="Fux0199"
//dev_stage="Adult"
//orce="Organ: prostate_normal; Vector: pucl8; Site_l: Smal : Site_l: Smal : A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=MR3&t2=MR3-FNO209-
3000li-004-hi0&ta3=2001-01-30&t4=1)
Seq primer: puc 18 forward
High quality sequence stop: 480.
Location/Qualifiers
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mRNA sequence.
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Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Shotgun sequencing of the human transcriptome with ORF expressed
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Proc. Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
20202663
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Pred. No. 3.8e-77;
1; Mismatches 1;
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70.1%;
ilarity 99.3%;
Conservative
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/clone_lib="MARC 1BOV"
                                                                                                                                                                                       Best Local Similarity 94.6
Matches 265; Conservative
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BE913718
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1 (pases 1 to 573)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore 18 and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST 30-AUG-2001
application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                     aggattataagaacggagggcctatggaggcccatgaggggggctgaacgtcacagcaaca 120
                                                                                                                                                                                                                                                                                      180
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                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                       Length 480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   573 bp mRNA linear 455541 MARC 1BOV Bos taurus cDNA 5', mRNA sequence. BI541703
                                                                                                                                                                    Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240 ggcaacattacttcatgatgcagccatgaacctgcggaag 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            314 GGCACCATTACTTCATGATGCAGCCATGAACCCTGCGGAAG 354
                                                                                                                                   DB 10;
                                                                                                                                   Score 265.8; DB 10;
Pred. No. 1.8e-73;
0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Bos taurus"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: ATTTAGGGGACACTATAG.
Location/Qualifiers
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                                                                                                                                 Query Match 67.1%;
Best Local Similarity 98.9%;
Matches 278; Conservative
                                                                   126 c
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Enkaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi; Eukaryota: Metazoa: Chordata: Craniata; Vertebrata; Euteleostomi; Eukaryota: Memmania; Eutheria; Rodentia: Sciurognathi; Muridae; Murinae; Mus. 1 (bases 1 to 598)

National Machine; Mac. nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

National Institutes of Health, Mammalian Gene Collection (MGC)

Tompublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: Gilbert Smith, Ph.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The T.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Inoyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://mage.llnl.gov

Plate: LLAM9146 row: o column: 17

High quality sequence stop: 593.
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/tissue_type="pooled"
/lab_host="PH10B"
/note="Vector: pCMV SPORT6; Site_1: XbaI; Site_2: XhoI;
/note="vector: pCMV SPORT6 issue from lymph node, ovary, fat, hypothelamus, and pituitary."

16 c 176 g 110 t
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/dev_stage="10 months, virgin"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 gcaacattacttcatgatgcagccatgaaccctgcggaag 280
                                                                                                                                                                                                                                                           Score 256; DB 10;
Pred. No. 2.4e-70;
0; Mismatches 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     414 GCAACATTACTTCATGATGCTGCCATGAATCCAGTGGAAG
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/strain="FvB/N"
/db_xref="taxon:10090"
/clone="twAGE:3969256"
/clone_lib="NCI_CGAP_Mam1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
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94.6%;
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Gaps

ö 645;

21;

Length Indels

DB 10;

Score 246.4; DB 10 Pred. No. 2.9e-67; 0; Mismatches

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. I (bases 1 to 1131)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (WGC)
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BG295496
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CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMIG377 row: c column: 07
High quality sequence stop: 753.
Location/Qualifiers
                                                                                                                                                       ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
                                                                                                                                                                                                                                                                                                             293 GGGGGGGGCCTGCCCACGCCCTCTATTTGCCTGCTACGAAAAGTTAAAAAAAGACATTG 352
                                                                                                                                                                                                                                                                                                                                                                    agigatgiaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg
                                                                                                                                                                                                                                                                                                                                                                                          233 AGAATCATGAGGACAGAGGGCCTGTGGAGGCCCATGCGGGGGCTGAACGTCACAGCAACA 292
                                                                                                                                   1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 gcaacattacttcatgatgcagccatgaaccctgcggaag 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/db_xref="taxon:10090"
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/clone_lib="NIH_MGC_94"
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                                                      62.2%;
ilarity 92.5%;
Conservative
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Matches 259;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: capabs-framil.nih.gov
Tissue Procurement: Jeffrey B. Green, M.D.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Prayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Thocyte Genomics. Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.lln.gov
Plate: LLAMIO98 row: p column: 24
High quality sequence start: 2
High quality sequence stop: 632.
Location/Qualifiers
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/clone_lib="NCI_CGAP_CG24"
/lab_host="DHB (TI_phage-resistant)"
/nab_host="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
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Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus.
1 (bases 1 to 645)
NIH-WGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Primer: Oligo dT
                Library constructed by Life Technologies. Investigator providing samples: Gilbert Smith, NIH" 175~c~172~g~110~t
                                                                                                                                                                                                                                                                                                                                                                                                                                               agtgatgtaatccaccctgggggcaatagccatattgccaatggtgcggccgggtgtgtg 240
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    284 AGTGACGTAATCCACCCAGGGGGCAATAGCCATATGCCAATGGTGCAGCCGGATGTGTG 343
                                                                                                                                                                        Gaps
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                                                                                                                               Length 598;
                                                                                                                                                                        21; Indels
Site_2: NotI; Cloned unidirectionally.
                                                                                                                                 DB 10;
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Best Local Similarity 92.5%; Pred. No. 2.8e-67;
Matches 259; Conservative 0; Mismatches 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Melton, D. Brown, J., Kenty, G., Permutt, A., Lee, C., Kaestner, K., Lemishka, I., Scearce, M., Brestelli, J., Gradwohl, G., Clifton, S., Hillier, L., Marra, M., Pape, D., Wylie, T., Martin, J., Blistain, A., Schmitt, A., Theising, B., Ritter, E., Ronko, I., Bennett, J., Cardenas, M., Gibbons, M., McCann, R., Cole, R., Tsagareishvili, R., Williams, T., Endocrine Pancreas Consortium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

    (bases 1 to 560)

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Dept of Molecular and Cellular Biology, 7 Divinity Ave, Cambridge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Library was constructed by Dr. Douglas Melton DNA sequencing by:
Washington University Genome Sequencing Center For information on
Obtaining a clone please contact: Juliana Brown
(brown@fas.harvard.edu)
Seq primer: -40RP from Gibco
High quality sequence stop: 430.
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                                                                                                                                                                                                                                                              240
                                                                                                                     /dev_stage="Embryonic day 10.5, E12.5, E16.5, newborn, adult, mixed"
                                                                      440
                   Gaps
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                                                                                                                                                                                                                                                          Contact: Douglas Melton, Klaus H. Kaestner, & Hiroshi Inoue
                                                    1 atgcagagtctacagcctgacccagctgcccgctatcgcaatgtgttggaggccctctgg
                                                                                                                                                                                           ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg
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 Pred. No. 3.5e-67
                  0; Mismatches
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Other_ESTs: ic92e02.x1
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 92.5%;
                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;, mRNA sequence.
BI794616
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Fax: 617-495-8557
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/note="Vector: pSPORT1; Site_1: Not I; Site_2: Sal I; Five libraries representing EIO.5/12.5 pancreatic bud, EIG.5 pancreas, newborn pancreas, adult pancreas, and adult islets of Langerhans were seperately constructed using SuperScript Plasmid Library kit (Life Technologies). CDNA was made by oilgo-dT priming and size-selected by column fractionation. Libraries were amplified once on solid support and plasmid DNA from each library was prepared and mixed in equal amounts. The mixed library DNA was normalized by method #4 from Bonaldo, Lennon, and Soares 1996 Genome Research 6:791-806; 0.5 microgram single-stranded mixed library plasmid DNA was mixed with 5 micrograms PCR product representing mixed library inserts and hybridized to an Ecot of 6. Single-stranded (unhybridized to an Ecot of 6. Single-stranded (unhybridized by mach to make this library." x and soares 163 g 105 t
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1 (bases 1 to 574)
Caetano, A.R., Johnson, R.K. and Pomp, D.
Generation and sequence characterization of a normalized cDNA library from swine ovarian follicles
Unpublished (2001)
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Pred. No. 8.8e-67;
0; Mismatches 22; 1
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Department of Animal Science
University of Nebraska, Lincoln
Lincoln, NE 68583-0908, USA
Tel: 402 472 6416
Fax: 402 472 6362
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Conservative
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 501)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Chu-Xia Deng Ph.D.
CDNA Library Preparation: Life Technologies, Inc.
                                     /strain="University of Nebraska, Lincoln Swine Selection
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ggcgcagggcctgcccacgccctttattttgcctgctacgaaaagttaaaaaagacattg 180
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                                                                            /clone="UNL-P-FN-cy-f-02-0-UNL"
/clone_lib="UNL-P-FN"
                                                                                                                                                                                                                                                                                                                                                     Score 244.6; DB Pred. No. 1e-66; 0; Mismatches
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                           scrofa"
                                                                /db_xref="taxon:9823"
                                                                                                                                                                                                                                                                                   TAG_SEQ=None found"
171 c 165 g
Location/Qualifiers
                          /ordanism="Sus
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CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Washington University Genome Sequencing Center
Clone distribution: NCI-CGAP clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall; Site_2: NotI; Cloned unidirectionally. Primer: Oligo dT. Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Chu-Xia Deng, NIH Reference for transgenic model: Xu et al., Nature Genetics
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 701)
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National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
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/tissue_type="tumor, gross tissue"
/dev_stage="10 months"
/lab_host="DH10B"
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Pred. No. 2.3e-63;
0; Mismatches 20;
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/organism="Mus musculus"
/strain="129 - C57/86 - Fv
/db_xref="taxon:10090"
/clone="IMAGE:2648821"
                                                                                                                                                                                       Seq primer: -40RP from Gibco
High quality sequence stop: 427
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139 c 144
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92.5%;
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Contact: Smith TPL
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Matches 230;
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                                                                                                                                                                                                                                                                                          /note="Organ: brain; Vector: pCMV-SPORT6; Site_1: Not1; Site_2: EcoRV (destroyed); RNA Source normal medulla from annonymous male age 27. Library is oligo-dT prinned and directionally cloned (EcoRV Site is destroyed upon cloning). Average insert size 1.3 kb, insert size range 0.9-3 kb. Library is normalized and enriched for full-length clones and was constructed by C. Gruber (Invitrogen). Research Genetics tracking code 013. Note: this is a NIH_MGC Library."
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Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T.,
Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett
G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G.,
Fertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
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Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M. A.G.E. Consortium (LLNL)
DNA Sequencing by: The I.M. A.G.E. Consortium (LLNL)
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov. a column: 20
Plate: LLAM11419 row: a column: 20
High quality sequence start: 29
High quality sequence stop: 699.
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AW326482
AW326482.1 GI:6762403
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                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="INAGE:5168539"
/clone_lib="NIH_MGC_119"
/tissue_type="medulla"
/lab_host="DH108"
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Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 20
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
1 (bases 1 to 817)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Vector: pcMv SPORT6; Site_1: XbaI; Site_2: XhoI; Library made from pooled tissue from lymph node, ovary, fat, hypothalamus, and pituitary."
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National Institutes of Health, Mammalian Gene Collection (MGC)
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Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
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at Animal Research Center
Center, NE 68933-0166, USA
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Pred. No. 4.7e-60;
); Mismatches 11;
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                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:9913"
/clone_lib="MARC 1BOV"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                        FORWARD: AGGAAACAGCTATGACCAT
BACKWARD: GTTTCCCAGCACGACG
Plate: 8 row: F column: 16
Seq primer: ATTTAGGGACACTATAG.
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/organism="Bos taurus<sup>r</sup>
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PCR PRimers
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USDA, ARS, US Meat A
PO Box 166, Clay Cen
Tel: 402 762 4366
Fax: 402 762 4390
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BI103329
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Townsend Hall,
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pgm2n.pk008.12 Normalized Chicken Breast Muscle, Leg Muscle, and Epiphyseal Growth Plate cDNA library (pgm2n) Gallus gallus cDNA clone pgm2n.pk008.12 5' similar to ref[XP_050766.1 (XM_050766) putative mitochondrial solute carrier [Homo sapiens] gblAAK49519.1|AF337402_1 (AF327402) putative mitochondrial solute carrier Flow sapiens]

gblAAK49519.1|AF337402_1 (AF327402) putative mitochondrial solute carrier splice variant [Homo sapiens], mRNA sequence.
                                                                                                                                                                                                                  /clone="IMAGE:5043992"
/clone_lib="NOI_CGAP_Kid14"
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/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.75 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library. |"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gallus gallus
Vakaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Galliformes; Phasianidae;
Phasianinae; Gallus.
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Cogburni.La. and Monsonego-Ornan,E.
ESTS from Normalized Chicken Breast Muscle, Leg Muscle, and
Epiphyseal Growth Plate cDNA library, USDA/IFAFS Animal Genome
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
               DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
row: 1 column: 09
High quality sequence stop: 777.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                   56.3%; Score 222.8; DB 10; Length ilarity 91.5%; Pred. No. 9.9e-60; Conservative 0; Mismatches 22; Indels
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                                                                                                                                                                   /organism="Mus musculus"
                                                                                                                                                                                  /strain="FVB/N"
/db_xref="taxon:10090"
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Contact: Larry A. Cogburn
University of Delaware
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SOURCE
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TITLE
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/dev_stage="Breast,leg:Embryo(d19);post-hatch(1d,1,3,5,7,9,1) weeks);growth plate(1d,7d,14d post-hatch)"
/lab_host="E. coli EmbH10B.
/note="vector: pcMvSPORT6; Library made from equivalent pools of total RNA isolated from each tissue (embryonic muscle 33.3%; juvenile muscle 33.3%; and epiphyseal growth plate 33.3% of the final RNA pool). Single pass sequencing from 5'-end"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                453 bp mRNA linear EST 18-JAN-2001 CM2-UT0112-091200-598-c06 UT0112 Homo sapiens cDNA, mRNA sequence. BF916224.1 GI:12307682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
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Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                             Muscle,
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                         /tissue_type="Breast muscle, leg muscle and epiphyseal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="pgm2n.pk008.12"
/clone_lib="Normalized Chicken Breast Muscle, Lecand Epiphyseal Growth Plate cDNA library (pgm2n)'/sex="Male and Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 others
                                                          www.chickest.udel.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Gallus gallus"
/strain="Commercial broiler and
Strains 90 & 21"
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                                                                                                                                                                                                                                  /db_xref="taxon:9031"
                                                       gburn@udel.edu, www
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                         growth plate"
Tel: 302-831-1335
Fax: 302-831-2822
Email: cogburn@udel.
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Matches 226; Conserv
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/organism="Homo sapiens"
/db_xref="taxon:9606"
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/clone_lib="UT0112"
/dev_aref="Adult"
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Site_2: SmaI; A mini-library was made by cloning products
derived from ORESTES PCR (U.S. Letters Patent application
No. 196,716 - Ludwig Institute for Cancer Research)
profiles into the puc 18 vector. Reverse transcription of
tissue mRNA and cDNA amplification were performed under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                        Fax: +55-11-2704922
Fax: +55-11-2707001
Bmail: asimpson@ludwig.org.br
Project: This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=CM2&t2=CM2-UT0112-091200-598-c06&t3=2000-12-094t4=1)
Seq primer: puc 18 forward
High quality sequence start: 12
High quality sequence stop: 453.
                                              Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
Brazil
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    131 ctgcccacgccctttattttgcctgctacgaaaagttaaaaagacattgagtgatgtaa 190
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Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
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Best Local Similarity 97.6%; Pred. No. 6.8e-50;
Matches 205; Conservative 0; Mismatches 4
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125 c 126 g 90 t
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